PROJECT INFORMATION

Project Title	Control Velvetgrass (Holcus lanatus) in the Kern Canyon of Sequoia National Park and Sequoia National Forest
Brief Description	This is a joint effort between Sequoia National Park (NPS) and Sequoia National Forest (USFS), with work on lands throughout the Kern drainage necessary to successfully eradicate velvetgrass from the Kern Canyon. Large scale efforts have been implemented from 2009-2011, and have been successful at reducing populations of velvetgrass. Combining continued treatment efforts with the prior three years of work we have conducted, will allow us to eradicate velvetgrass from the Kern Canyon. Velvetgrass is a perennial grass, native to Europe, which was brought into California as forage. It escaped from cultivation and has become a weed species, that is a prolific seed producer, can exist in the seed bank in large numbers, and can become dominant if not controlled. It is easily spread by hikers and stock users that visit the area. The presence of velvetgrass has required restricting grazing in the area prior to the onset of flowering to limit potential spread. Initial efforts to reduce velvetgrass using herbicides, tarping and hand-pulling have been successful, but further funding is required to ensure that it does not again come to dominate the area. These actions will eliminate the need for future large-scale eradication efforts. Velvetgrass is listed as "Moderate" by Cal-IPC, and it is noted that "impacts can be more severe locally, especially in wetland areas." Montane meadows and riparian wetlands are rare vegetation types in SEKI that occupy less than 2 percent of the land area, and are critical for habitat protection, native species diversity, biomass, and productivity.
Total Requested Amount	237,638.00
Other Fund Proposed	410,100.00
Total Project Cost	647,738.00
Project Category	Site Improvement/Restoration
Project Area/Size	200
Project Area Type	Acres
Have you submitted to SNC this fiscal year?	No
Is this application related to other SNC funding?	No

Project Results
Restoration

Project Purpose	Project Purpose Percent
Resource Management	
Water Quality	

County
Tulare

Sub Region
South

PROJECT CONTACT INFORMATION

Name	Ms. Athena Demetry,
Title	Ecologist
Organization	Sequoia and Kings Canyon National Parks
Primary Address	47050 Generals Highway, , , Three Rivers, CA, 93271
Primary Phone/Fax	559-565-4479 **Ext.**
Primary Email	matt_bahm@nps.gov

PROJECT LOCATION INFORMATION

Project Location

Address:	Sequoia National Park, Kern Canyon, Sequoia National Forest, Three Rivers, CA, 93271 United States
Water Agency:	Regional Water Quality Control Board
Latitude:	36.342648
Longitude:	118.40959
Congressional District:	n/a
Senate:	n/a
Assembly:	n/a
Within City Limits:	No
City Name:	

ADDITIONAL INFORMATION

Grant Application Type

Grant Application Type: **Category One Site Improvement**
Grant Application Type: **Category One Site Improvement**

PROJECT OTHER CONTACTS INFORMATION

Other Grant Project Contacts

Name:	Mr. Matt Bahm,
Project Role:	Day-to-Day Responsibility
Phone:	5595653720
Phone Ext:	
E-mail:	matt_bahm@nps.gov

UPLOADS

The following pages contain the following uploads provided by the applicant:

Upload Name
Completed Application Checklist
Table of Contents
Full Application Form
Authorization to Apply or Resolution
Authorization to Apply or Resolution
Narrative Descriptions
Detailed Budget Form
NEPA Documentation
NEPA Documentation
NEPA Documentation
Letters of Support
Long Term Management Plan
Project Location Map
Topographic Map

Topographic Map
Photos of the Project Site
Photos of the Project Site
Photos of the Project Site
Photos of the Project Site
Photos of the Project Site
Photos of the Project Site
Land Tenure- Only for Site Improvement Projects
Land Tenure- Only for Site Improvement Projects
Site Plan - Only Site Improv. or Restoration Proj.
Long Term Management Plan
Photos of the Project Site
Parcel Map Showing County Assessors Parcel Number
CEQA Documentation

To preserve the integrity of the uploaded document, headers, footers and page numbers have not been added by the system.

Appendix B1
Full Application Checklist

Project Name: **Control Velvetgrass (*Holcus lanatus*) in the Kern Canyon of Sequoia National Park and Sequoia National Forest**

Applicant: **Matt Bahm, Ecologist**
Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, CA 93271-9651

Please mark each box: check if item is included in the application; mark "N/A" if not applicable to the project. "N/A" identifications must be explained in the application. Please consult with SNC staff prior to submission if you have any questions about the applicability to your project of any items on the checklist. All applications must include a CD including an electronic file of each checklist item, if applicable. The naming convention for each electronic file is listed after each item on the checklist. (Electronic File Name = EFN: "naming convention". file extension choices)

Submission requirements for all Category One and Category Two Grant Applications

1. ☒ Completed Application Checklist *(EFN: Checklist.doc,.docx,.rtf, or .pdf)*

2. ☒ Table of Contents *(EFN: TOC.doc,.docx,.rtf, or .pdf)*

3. ☒ Full Application Project Information Form *(EFN: SIform.doc, .docx, .rtf, or .pdf)*

4. ☒ Authorization to Apply or Resolution *(EFN: authorization.doc, .docx, .rtf, or .pdf)*

5. ☒ Narrative Descriptions - Submit a single document that includes each of the following narrative descriptions *(EFN: Narrative.doc, .docx, .rtf)*
   a. ☒ Detailed Project Description (5,000 character maximum)
      - ☒ Project Description including Goals/Results, Scope of Work, Location, Purpose, etc.
      - ☒ Project Summary
      - ☒ Environmental Setting
   b. ☒ Workplan and Schedule (1,000 character maximum)
   c. ☒ Restrictions, Technical/Environmental Documents and Agreements(1,000 character maximum)
   d. ☒ Organizational Capacity(1,000 character maximum)
   e. ☒ Cooperation and Community Support (1,000 character maximum)
   f. ☒ Long Term Management and Sustainability (1,000 character maximum)
   g. ☒ Performance Measures (1,000 character maximum)

6. Supplemental and Supporting documents
   a. ☒ Detailed Budget Form (EFN: Budget.xls, .xlsx)

b. Restrictions, Technical/Environmental Documents and Agreements, as applicable
   N/A Restrictions / Agreements *(EFN: RestAgree.pdf)*
   N/A Regulatory Requirements / Permits *All work will be conducted on Federal Public Lands and has met necessary permitting requirements.*
   N/A California Environmental Quality Act (CEQA) documentation *We are asking SNC to act as the lead agency under CEQA-small habitat restoration.*
   ☒ National Environmental Policy Act (NEPA) documentation *(EFN: NEPA.pdf)*
c. Cooperation and Community Support
   ☒ Letters of Support *(EFN: LOS.pdf)*
d. Long-Term Management and Sustainability
   ☒ Long-Term Management Plan *(EFN: LTMP.pdf)*
e. Maps and Photos
   ☒ Project Location Map *(EFN: LocMap.pdf)*
   N/A Parcel Map showing County Assessor's Parcel Number(s) *Federal land with no Parcel Number.*
   ☒ Topographic Map *(EFN: Topo.pdf)*
   ☒ Photos of the Project Site *(10 maximum) (EFN: Photo.jpg, .gif)*
f. Additional submission requirements <u>for Conservation Easement Acquisition applications only</u>
   N/A Acquisition Schedule *Not a Conservation Easement Acquisition*
   N/A Willing Seller Letter *Not a Conservation Easement Acquisition*
   N/A Real Estate Appraisal *Not a Conservation Easement Acquisition*
   N/A Conservation Easement Language *Not a Conservation Easement Acquisition*
g. Additional submission requirements <u>for Site Improvement / Restoration Project applications only</u>
   ☒ Land Tenure Documents – attach only if documentation was not included with Pre-application *(EFN: Tenure.pdf)*
   ☒ Site Plan *(EFN: SitePlan.pdf)*
   N/A Leases or Agreements *All lands are federally owned.*

I certify that the information contained in the Application, including required attachments, is accurate.

_____ _____

Signed *(Authorized Representative)* Date

_____

Name and Title *(print or type)*

TABLE OF CONTENTS

Appendix B2

SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - PROJECT INFORMATION FORM

Rev. August 2011

PROJECT NAME Control Velvetgrass (*Holcus lanatus*) in the Kern Canyon of Sequoia National Park and Sequoia National Forest

APPLICANT NAME *(Legal name, address, and zip code)*

Matt Bahm, Ecologist
Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, CA 93271-9651

PERSON WITH FISCAL MANAGEMENT RESPONSIBILITY FOR GRANT CONTRACT/INVOICING

Name and title – type or print	*Phone*	*Email Address*
☐Mr.		
☒Ms. Lora Gomes, Budget Analyst	559-565-3151	lora_gomes@nps.gov

COUNTY ADMINISTRATOR OR PLANNING DIRECTOR CONTACT INFORMATION *(At least one entry Is required)*

Name: Mr. Alan Ishida, Supervisor, District 1 Tulare County & Chairman of the Board of Supervisors — *Phone Number: 559-636-5000*

Email address: aishida@co.tulare.ca.us

Name: — *Phone Number:*

Email address:

NEAREST PUBLIC WATER AGENCY (OR AGENCIES) CONTACT INFORMATION *(At least one entry Is required)*

Name: Regional Water Quality Control Board, Central Valley Region — *Phone Number:* (559) 445-5116

Email address: info5@waterboards.ca.gov

Name: Kaweah Delta Water Conservation District — *Phone Number: (559) 747-5601*

Email address: kaweah@kdwcd.com

Please identify the appropriate project category below and provide the associated details *(Choose One)*

☒ Category One Site Improvement
☐ Category Two Pre-Project Activities
☐ Category One Conservation Easement Acquisition

☒ **Site Improvement/Conservation Easement Acquisition**

Project area: Kern Canyon, Sequoia National Park and Sequoia National Forest

Total Acres: 4.75 acres of velvetgrass infestations will be treated within a matrix of 200 acres

SNC Portion (if different): N/A

Total Miles (i.e. river or stream bank): N/A

Select one primary Site Improvement/Conservation Easement Acquisition deliverable

☒ Restoration
☐ Enhancement
☐ Resource Protection
☐ Infrastructure Development / Improvement
☐ Conservation Easement

SNC Portion (if different): _____N/A_____ **For Conservation Easement Acquisitions Only** ☐Appraisal Included ☐Will submit appraisal by_____	
☐ **Pre-Project Activities**	**Select <u>one</u> primary Pre-Project deliverable** ☐ Permit ☐ CEQA/NEPA Compliance ☐ Appraisal ☐ Plan ☐ Condition Assessment ☐ Biological Survey ☐ Environmental Site Assessment

United States Department of Agriculture
Forest Service
Sequoia National Forest
Giant Sequoia National Monument
Western Divide District
32588 Highway 190
Springville, CA 93265
(559) 539-2607 / (559) 539-2067 (fax)
www.fs.fed.us/r5/sequoia/

File Code: 2320

Date: January 20, 2012

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

To whom it may concern:

Sequoia and Kings Canyon National Parks is submitting a grant proposal with the Sierra Nevada Conservancy that would implement actions to control velvet grass (a noxious weed) in the Kern Canyon, located in the Golden Trout Wilderness. The project area is within the Sequoia National Forest. The U.S. Forest Service authorized a similar project in 2011. This project would be a follow-up treatment of the same weed populations.

This letter documents that the U.S. Forest Service has tenure/ownership of the project area. Further, this letter authorizes personnel from Sequoia and Kings Canyon National Parks to implement the project, if awarded. The fiscal representative for the Sequoia National Forest is Vicki Yarbrough.

Sincerely,

Tricia Christofferson

TRICIA CHRISTOFFERSON
Acting District Ranger

United States Department of the Interior

NATIONAL PARK SERVICE
Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, California 93271-9651
(559) 565-3341

IN REPLY REFER TO:

N1617 (1.A.2)

January 17, 2012

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

To Whom It May Concern:

This is in reference to the following two grant applications from Sequoia and Kings Canyon National Parks:

1. Create a Restoration Plan for Cahoon Meadow, Sequoia National Park
2. Control of Velvet Grass in Kern Canyon, Sequoia National Park and Sequoia National Forest

The authorized fiscal representative for both grant applications is Lora Gomes, Budget Analyst. Ms. Gomes is authorized to sign all required grant documents including, but not limited to, the grant agreement, the application form, and payment requests.

The National Park Service has land tenure/ownership of the sites. The Cahoon Meadow project is contained within the designated boundary of Sequoia National Park. The Velvet Grass project is cooperative and includes United States Forest Service lands in Sequoia National Forest, though all work will be done by the National Park Service. A separate letter is included from Sequoia National Forest which authorizes this cooperative proposal for work on their lands.

Sincerely,

Karen F. Taylor-Goodrich
Superintendent

cc: Charisse Sydoriak, Chief of Resources Management and Science
Deb Pfenninger, Chief of Administration

DETAILED PROJECT DESCRIPTION

Project Summary: This is a joint effort between Sequoia National Park (NPS) and Sequoia National Forest (USFS), with work on lands throughout the Kern drainage necessary to successfully eradicate velvetgrass from the Kern Canyon. Large scale efforts have been implemented from 2009-2011, and have been successful at reducing populations of velvetgrass. Combining continued treatment efforts with the prior three years of work we have conducted, will allow us to eradicate velvetgrass from the Kern Canyon.

Environmental Setting: The project is located in the Kern Canyon area of Sequoia National Park and Sequoia National Forest, in designated wilderness that allows only non-motorized access to visitors. Pack stock animals are allowed to graze the meadows, prior to the onset of velvetgrass flowering.

Project Purpose and Scope: Velvetgrass is a perennial grass, native to Europe, which was brought into California as forage. It escaped from cultivation and has become a weed species, that is a prolific seed producer, can exist in the seed bank in large numbers, and can become dominant if not controlled. It is easily spread by hikers and stock users that visit the area. The presence of velvetgrass has required restricting grazing in the area prior to the onset of flowering to limit potential spread. Initial efforts to reduce velvetgrass using herbicides, tarping and hand-pulling have been successful, but further funding is required to ensure that it does not again come to dominate the area. These actions will eliminate the need for future large-scale eradication efforts. Velvetgrass is listed as “Moderate” by Cal-IPC, and it is noted that “impacts can be more severe locally, especially in wetland areas.” Montane meadows and riparian wetlands are rare vegetation types in SEKI that occupy less than 2 percent of the land area, and are critical for habitat protection, native species diversity, biomass, and productivity.

Project Approach: Effective control measures have been developed for the area. . We have reduced 52 of the 79 infestations on NPS lands to control status (< 1% of the original infestation), and with continued funding can focus our efforts on the 4 acres of infestations on the USFS lands. Herbicide application, hand-pulling, and tarping have successfully reduced populations throughout the area. We have successfully staged large work crews in the backcountry to complete the necessary activities. We have developed a partnership with Backcountry Horseman to provide pack support to our large work crews.

These crews have been effective at reducing velvetgrass, and we have developed efficient methods for logistical activities required for staging a large crew in a remote area. Of the 79 mapped infestations, 21 had no velvetgrass in 2011 and an additional 31 had canopy cover values of < 1%.

In years 4-6 of the project, crews will install tarping materials on large USFS velvetgrass infestations and use hand-pulling and herbicide application on other populations on NPS and USFS lands. Four seasonal NPS personnel will oversee work crews of 12 people to hand-pull velvetgrass and install tarping materials. A GS-11 Ecologist and GS-7 Biological Technician will provide logistical support to the project and oversee all herbicide applications.

Crews will also monitor past control efforts to ensure that they are not re-infested and to assess and correct any potential erosion problems as native vegetation begins to re-establish. Crews will continue to monitor treated areas and conduct searches to identify any potential new infestations of velvetgrass throughout the Kern Canyon and surrounding areas. Monitoring of the area will also reduce potential disturbances that would allow new velvetgrass seedlings to

establish.

Anticipated outcomes, products, and deliverables: Combining continued treatment efforts with the prior three years of work we have conducted, will allow us to eradicate velvetgrass from the Kern Canyon. We can continue to monitor infestations on NPS lands, while focusing our efforts on USFS lands that have only received a single year of treatment. Eliminating velvetgrass from the Kern Canyon will also ease grazing restrictions in these areas and reduce the likelihood of further spread via human activity.

Velvetgrass is currently restricted to the Kern drainage and small populations in Grant Grove, which are also being eradicated. These projects will reduce the chance of spread to other meadow systems in NPS and USFS lands. Elimination of velvetgrass populations will be a major accomplishment toward protecting the southern Sierra's highly-valued meadow ecosystems.

Results of this project will be shared with outside land managers by presentation at the California Invasive Plant Council meeting and potential preparation of a manuscript for publication in their proceedings. Results of the project will also be presented to the public through meetings with interested parties (i.e. Backcountry Horseman).

WORKPLAN AND SCHEDULE

Continuation of the current project will begin in late June 2012, with funding secured from the California Exotic Plant Management Team provided to continue restoration efforts while seeking more substantial funding. Work crews will conduct restoration efforts from June-September of each year, beginning on the southernmost USFS lands and move north during the season based on velvetgrass flowering to eliminate seed production. Outreach materials will be posted at trailheads and common visitor use areas to educate the public about the project. Crews will continue field work until mid-September or until weather-related closures require crews to vacate the wilderness for the season. At the end of the field season, the crew leader will work with the Ecologist to prepare year-end reports for the project, develop the work schedule for the following field season, and prepare the results for public presentation. The final completion report will be prepared for SNC by December 31, 2014.

DETAILED PROJECT DELIVERABLES	TIMELINE
Field Crews Conducting Restoration Activities	June-September 2012
Visitor Outreach Materials Posted	June-September 2012
Year-end Report to SNC	December 31, 2012
Public Presentation of Project Results (At least 1 per year)	October –December 2012
Field Crews Conducting Restoration Activities	June-September 2013
Visitor Outreach Materials Posted	June-September 2013
Year-end Report to SNC	December 31, 2013
Public Presentation of Project Results (At least 1 per year)	October –December 2013
Field Crews Conducting Restoration Activities	June-September 2014
Visitor Outreach Materials Posted	June-September 2014
Final Project Report to SNC	December 31, 2014
Public Presentation of Project Results (At least 1 per year)	October –December 2014

RESTRICTIONS, TECHNICAL/ENVIRONMENTAL DOCUMENTS AND AGREEMENTS

Restrictions/Agreements: There are no restrictions or agreements that will adversely impact project completion. The USFS and NPS have complied with all regulations and this work will continue an established project.

Regulatory Requirements/Permits: Permits are not applicable, because all work will be conducted on federal lands and requirements have been met to continue the current project work.

California Environmental Quality Act: We are asking Sierra Nevada Conservancy to act as the lead agency for CEQA requirements under Small Habitat Restoration.

National Environmental Policy Act: All NEPA documents are complete and have been included with this application for funding.

ORGANIZATIONAL CAPACITY

Matt Bahm, PhD in Wildlife Science, has been the invasive plant ecologist at SEKI since May 2010. He has 7 years of invasive plant management and native plant restoration experience. He has authored 6 scientific publications directly related to invasive plant management and native plant restoration.

Athena Demetry, MS in forest ecology, is the restoration ecologist at Sequoia and Kings Canyon National Parks. She has 14 years of experience planning and managing the disturbed lands restoration and invasive plant management programs in SEKI.

Rich Thiel has been at SEKI for 25 years, and has served as the lead for the duration of the project and provides a detailed knowledge of all project field activities. He has also developed a strong working relationship with work crew leaders, Back Country Horseman, as well as other NPS and USFS staff that have been instrumental in meeting the objectives of the project.

COOPERATION AND COMMUNITY SUPPORT

This project is a cooperative effort between Sequoia National Park and Sequoia National Forest. We consulted with American Conservation Experience prior to initiation of the project to determine feasibility of staging large work crews in a wilderness setting. After making the determination that is would be feasible, we partnered with the Backcountry Horseman's Association to provide pack stock support for the work crews. Backcountry Horseman's Association volunteer's their time and stock, saving a tremendous amount of money and logistical planning for the project. They have sent a letter of support that is included with the application.

LONG TERM MANAGEMENT AND SUSTAINABILITY

Both Sequoia National Park and Sequoia National Forest General Management Plans require management of invasive, non-native plants. In addition, Sequoia and Kings Canyon National Parks also has a Management Directive (No. 38) that requires preventing the spread of invasive species. At the conclusion of this project, crews will continue to monitor the areas to ensure that velvetgrass is fully eradicated and remove any velvetgrass individuals. Base-funded positions will then be used to monitor the area on a consistent basis. Invasive plant crews and meadow monitoring crews from the NPS, as well as USFS botanical crews, will be sent to the Kern Canyon. This will provide multiple efforts during each growing season that will ensure that the area will be monitored on a recurring annual basis, and any remaining plants are removed. These continuing efforts will ensure that large-scale restoration will not be necessary in the future.

PERFORMANCE MEASURES

Acres of Land Improved or Restored

This project will restore 4.75 acres of land currently invaded by velvetgrass. These acres are located within a greater matrix of approximately 200 acres, spread out along nearly 8 miles of wet meadow and riparian habitat along the Kern River. With funding from SNC to complete years 4-6 of the current project, ecological function and habitat quality will be improved on approximately 200 acres by restoring the 4.75 acres currently infested with velvetgrass.

Appendix B3

SIERRA NEVADA CONSERVANCY
PROPOSITION 84 - DETAILED BUDGET FORM

Project Name: Control Velvetgrass (Holcus lanatus) in the Kern Canyon of Sequoia National Park and Sequoia National Forest

Applicant: Matt Bahm, Sequoia National Park

SECTION ONE DIRECT COSTS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**	**Total**
NPS Employee Salaries				$35,128.00	$35,128.00	$35,128.00	$105,384.00
ACE Work Crews (10-12 people)				$17,600.00	$41,600.00	$41,600.00	$100,800.00
Pack Support for NPS Crew				$7,500.00	$7,500.00	$7,500.00	$22,500.00
Project Equipment				$1,000.00	$1,000.00	$750.00	$2,750.00
DIRECT COSTS SUBTOTAL:	$0.00	$0.00	$0.00	$61,228.00	$85,228.00	$84,978.00	$231,434.00

SECTION TWO INDIRECT COSTS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**	**Total**
Outreach and Educational Materials				$500.00	$500.00	$500.00	$1,500.00
Performance Measure Reporting				$1,538.00	$1,568.00	$1,598.00	$4,704.00
INDIRECT COSTS SUBTOTAL:	$0.00	$0.00	$0.00	$2,038.00	$2,068.00	$2,098.00	$6,204.00
PROJECT TOTAL:	$0.00	$0.00	$0.00	$63,266.00	$87,296.00	$87,076.00	$237,638.00

SECTION THREE Administrative Costs (Costs may n*ot to exceed 15% of total Project Cost*) :							**Total**
**Organization operating/overhead costs*							$0.00
							$0.00
							$0.00
							$0.00
							$0.00
ADMINISTRATIVE TOTAL:	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
SNC TOTAL GRANT REQUEST:	$0.00	$0.00	$0.00	$63,266.00	$87,296.00	$87,076.00	$237,638.00

SECTION FOUR OTHER PROJECT CONTRIBUTIONS	**Year One**	**Year Two**	**Year Three**	**Year Four**	**Year Five**	**Year Six**	**Total**
List other funding or in-kind contibutors to project (i.e. Sierra Business Council, Department of Water Resources, etc.)							
NPS FLREA Funding	$77,900.00	$86,000.00	$86,012.00				$249,912.00
Backcountry Horseman (Donation of Pack Stock and Time)	$17,500.00	$17,500.00	$17,500.00	$17,500.00	$17,500.00	$17,500.00	$105,000.00
USFS Wilderness Stewardship Grant			$15,594.00				$15,594.00
CA Exotic Plant Management Team Funding **(Awarded)**				$24,000.00			$24,000.00
USFS Wilderness Stewardship Grant **(In Review)**				$15,594.00			$15,594.00
Total Other Contributions:	$95,400.00	$103,500.00	$119,106.00	$57,094.00	$17,500.00	$17,500.00	$410,100.00

NOTE: The categories listed on this form are examples and may or may not be an expense related to the project. Rows may be added or deleted on the form as needed. Applicants should contact the SNC if questions arise.

* Operating Costs should be allocated to the pecentage that is applicable to the grant based on your cost allocation methodology and cannot exceed 15% of your total project costs.

RESTRICTIONS, TECHNICAL/ENVIRONMENTAL DOCUMENTS AND AGREEMENTS

Restrictions/Agreements: There are no restrictions or agreements that will adversely impact project completion. The USFS and NPS have complied with all regulations and this work will continue an established project.

Regulatory Requirements/Permits: Permits are not applicable, because all work will be conducted on federal lands and requirements have been met to continue the current project work.

California Environmental Quality Act: We are asking Sierra Nevada Conservancy to act as the lead agency for CEQA requirements under Small Habitat Restoration.

National Environmental Policy Act: All NEPA documents are complete and have been included with this application for funding.

PEPC
Planning, Environment and Public Comment

National Park Service
U.S. Department of the Interior

Home | Plans | Project Search | Reports | Tools | Admin | Logout

Go back

Project Home

[1] Project Setup

[2] Funding

[3] Internal Scoping / IDT Tasks

[4] Natural/Cultural Compliance

[5] Internal Documents / Comments

[6] Public Communication

[7] Public Documents & Comment Analysis

[8] Close Project

Project Overview Page

Print

SEKI

Invasive and Non-native Vegetation Management Program

Project ID: 29487
Old Project ID:
Project Status: Proposed
Compliance Status: In Process
Funding Status: Unfunded
Funded Date: Unknown
Sensitive: No
Project Target Start Date: 02/15/2010 **Project Creation Date:** 01/06/2010
NEPA Status:
Title: Invasive and Non-native Vegetation Management Program
Secondary Title: 2010-2014 Programmatic for the Survey and Treatment of Non-Native Plants

Description: Invasive, exotic plant species are the second leading cause worldwide (following habitat destruction) of native biodiversity decline. Exotic plants have the potential to displace native plants and alter the structure and processes of native plant communities. With several highly invasive species currently forming discrete populations within SEKI and several poised along the parks' boundaries, a comprehensive program focused on early detection and eradication will prevent many species from becoming widespread, ecologically damaging, and expensive problems.(SEKI Resource Management Plan, 1999).

Removal of exotic species is consistent with 2006 National Park Service Management Polices (4.4.4.2). "All exotic plant and animal species that are not maintained to meet an identified park purpose will be managed-up to and including eradication-if (1) control is prudent and feasible and, (2) the exotic species:" meets the criteria listed in 4.4.4.2 of the 2006 Management Polices.

See attached table with the invasive plants selected for management that meet these criteria.

This categorical exclusion document (CE) will serve as a formal record for the exotic vegetation management program for 2010 to 2014. The Council on Environmental Quality (CEQ) directs agencies to use CEs for actions "which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement" (40 CFR §1500-1508). This project is categorically exempt under NPS Director's Order #12, Action 3.4 E. 2.: Restoration of noncontroversial native species into suitable habitats within their historic range and the elimination of exotic species.

This project includes survey and monitoring of exotic vegetation, follow-up treatment, preventive measures, and data management, using park approved methods (new methods may require separate compliance package).

Locations include (Parkwide, both frontcountry and wilderness):
•Grant Grove/Wilsonia area
•Cedar Grove area
•Redwood Canyon
•Dorst Campground
•Red Fir/Wuksachi/Lodgepole/Wolverton area
•Giant Forest
•Recent fires
•Hidden Fire

•Yucca Creek/Grunnigans Ranch (blackberry)
•South Fork Kaweah (blackberry)
•Sugarloaf/Roaring River area
•Bubbs Creek
•Paradise Valley
•Middle Fork of Kaweah
•Kern Canyon

New locations may be added each year as a result of surveys, ground disturbances, and project work.

Methods include:
•Manual (hand-pulling, hand-digging)
•Mowing with weed eaters or mowers
•Treat with herbicide (glyphosate, clopyralid, rimsulfuron) using backpack sprayers and truck-mounted sprayer.
•Tarping (placing black fabric over the infestation for 1 to 2 years)

Timing is generally March to November, periodically throughout this period.

Potential Tools and Equipment:
-Backpack sprayers (wilderness)
-Truck-mounted sprayer
-DR Mower
-Weed eaters
-Helicopter (poss. for removing tarps from wilderness upon project completion)
-Stock support to Kern Canyon and Sugarloaf Meadow

Mitigation/BMPs to be utilized:
•NPS Pesticide Use Permit must be obtained through IPM coordinator.
•Other methods will be considered before using herbicide
•California Laws and Regulations will be followed

Project Leader: Athena Demetry
NEPA Specialist: Nancy Hendricks
NHPA Specialist: Tom Burge

IDT Team Member	Phone#	Extension	Responsibility
David Allen	559-565-3162		District FMO S
Dave Bartlett	559-4337		Fire Management Officer
Colleen Bathe	559-565-3130		Chief of Interpretation, Education, and Partnerships
Daniel Blackwell	559-565-3140		Chief of Maintenance and Construction
Danny Boiano	559-565-4273		Aquatic Ecologist
Tom Burge	559-565-3139		NHPA Specialist
Tony Caprio	559-565-3126		Fire Ecologist
Athena Demetry	559-565-4479		Project Leader
Joel Despain	559-565-3717		Geologist
Annie Esperanza			Air Resources Specialist
Gregg Fauth			Wilderness Coordinator
Adrienne Freeman	209.372.0529		Public Information Officer
Sylvia Haultain	559-565-3769		Plant Ecologist - Special Status Vegetation
Kevin Hendricks	360-565-3110		Chief Ranger
Nancy Hendricks	559-565-3102		NEPA Specialist
Thomas Liu	559-565-3103		Concessions
Robert Montgomery	559-565-3730		Safety/Hazmat
Deb Pfenninger	559-565-3150		Chief of Business and Administrative Support
Brit Rosso	559-565-4342		Chair KCMT
Christine Smith	559-565-3105		Management Assistant
Nate Stephenson			Research Ecologist
Charisse Sydoriak	559-565-3120		Chief of Resources

Jerry Torres	559-565-4360	Facility Manager (RAT)
Jack Vance	559-565-3143	Chair SMT
Jack Vance	559-565-3143	Facility Manager (BUG)
Tom Warner	559-565-3722	IPM Coordinator
Harold Werner	559-565-3123	Wildlife Ecologist

Project Type: Resource Management Plan/Site Plan
Project Category: Plant Communities (Vascular and Non-Vascular)
External Agency:
Division/Office: Division of Resources Management and Science

County, State	District, Section	Geo. Marker	Other
Tulare County, CA			
Fresno County, CA			

Admin. Record Contact: Nancy Hendricks
Admin. Record Location: Compliance Office

Target Project Start: 02/15/2010
Target Project End:
Target Agreement:
Target Alternatives:

Actual Project Start:
Actual Project End:
Actual Agreement:
Actual Agreement:

Title

(36.7 KB, .docx file)
(link)

Title

No Link or File has been Submitted.

Title

No Link or File has been Submitted.

Title

No Link or File has been Submitted.

Document Title	Review Start	Review End	Peer Review Req.

This project has no 'internal documents'.

Document Title	Review Start	Review End	In Review

This project has no 'public documents'.

National Park Service
U.S. Department of the Interior

Sequoia & Kings Canyon NP
Date: 03/13/2010

ENVIRONMENTAL SCREENING FORM (ESF)
DO-12 APPENDIX 1

Date Form Initiated: **01/08/2010**

Updated May 2007 - per 2004 Departmental Manual revisions and proposed Director's Order 12 changes

A. PROJECT INFORMATION

Park Name:	Sequoia & Kings Canyon NP
Project Title:	Invasive and Non-native Vegetation Management Program
PEPC Project Number:	29487
PMIS Number:	
Project Type:	Resource Management Plan/Site Plan (RMP)
Project Location:	County, State: Tulare County, California
Project Location:	County, State: Fresno County, California
Project Leader:	Athena Demetry
Administrative Record Location:	Compliance Office
Administrative Record Contact:	Nancy Hendricks
Notes:	It would be potentially helpful to give some kind of information on the anticipated work locations as a baseline. CAS

B. PROJECT DESCRIPTION/LOCATION

Invasive, exotic plant species are the second leading cause worldwide (following habitat destruction) of native biodiversity decline. Exotic plants have the potential to displace native plants and alter the structure and processes of native plant communities. With several highly invasive species currently forming discrete populations within SEKI and several poised along the parks' boundaries, a comprehensive program focused on early detection and eradication will prevent many species from becoming widespread, ecologically damaging, and expensive problems.(SEKI Resource Management Plan, 1999). Removal of exotic species is consistent with 2006 National Park Service Management Polices (4.4.4.2). "All exotic plant and animal species that are not maintained to meet an identified park purpose will be managed-up to and including eradication-if (1) control is prudent and feasible and, (2) the exotic species:" meets the criteria listed in 4.4.4.2 of the 2006 Management Polices.

See attached table with the invasive plants selected for management that meet these criteria.

This categorical exclusion document (CE) will serve as a formal record for the exotic vegetation management program for 2010 to 2014. The Council on Environmental Quality (CEQ) directs agencies to use CEs for actions "which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement" (40 CFR 1500-1508). This project is categorically exempt under NPS Director's Order #12, Action 3.4 E. 2.: Restoration of noncontroversial native species into suitable habitats within their historic range and the elimination of exotic species.

This project includes control, survey and monitoring of exotic vegetation, follow-up treatment, preventive measures, and data management, using park approved methods (new methods may require separate compliance package). Work may be conducted by park staff (biologists, rangers, maintenance), VIPS, and partners such as USGS.

Locations include (Parkwide, both frontcountry and wilderness):

- Grant Grove/Wilsonia area
- Cedar Grove area
- Redwood Canyon
- Dorst Campground
- Red Fir/Wuksachi/Lodgepole/Wolverton area
- Giant Forest
- Recent fires
- Hidden Fire "
- Yucca Creek/Grunnigans Ranch (blackberry)
- South Fork Kaweah (blackberry)
- Sugarloaf/Roaring River area
- Bubbs Creek
- Paradise Valley
- Middle Fork of Kaweah
- Kern Canyon

New locations may be added each year as a result of surveys, ground disturbances, and project work.

Methods include:

- Manual (hand-pulling, hand-digging)
- Mowing with weed eaters or mowers
- Treat with herbicide (glyphosate, clopyralid, rimsulfuron) using backpack sprayers and truck-mounted sprayer.
- Tarping (placing black fabric over the infestation for 1 to 2 years)

Timing is generally March to November, periodically throughout this period. Potential Tools and Equipment: - Backpack sprayers (wilderness) - Truck-mounted sprayer - DR Mower - Weed eaters - Helicopter (poss. for removing tarps from wilderness upon project completion) - Stock support to Kern Canyon and Sugarloaf Meadow.

Additional mitigation/BMPs to be utilized: NPS Pesticide Use Permit must be obtained through IPM coordinator. Other methods will be considered before using herbicide. California Laws and Regulations will be followed

Preliminary drawings attached? **No**

Background information attached? **Yes**

Target compliance completion date: **02/15/2010**

Is project a hot topic (controversial or sensitive issues that should be brought to attention of Regional Director)?

C. RESOURCE EFFECTS TO CONSIDER:

Identify potential effects to the following physical, natural, or cultural resources	**No Effect**	**Negligible Effects**	**Minor Effects**	**Exceeds Minor Effects**	**Data Needed to Determine/Notes**
1. Geologic resources – soils, bedrock, streambeds, etc.	No				No effects, JDD
2. From geohazards	No				No effects, JDD
3. Air quality		Negligible			Short term effects when using mowers and weed eaters. If it hasn't already been done, these types of equipment should all be 4-cycle to reduce emissions. AME
4. Soundscapes		Negligible			Short term effects when using mowers or weed eaters. AME
5. Water quality or quantity		Negligible			Some potential due to soil disturbance and use of herbicides. hw
6. Streamflow	No				hw

characteristics					
7. Marine or estuarine resources	No				hw
8. Floodplains or wetlands		Negligible			Some potential due to soil disturbance and use of herbicides. hw
9. Land use, including occupancy, income, values, ownership, type of use	No				If doing activities near privately owned or occupied areas provide information to concerned external parties (cms)
10. Rare or unusual vegetation – old growth timber, riparian, alpine		Negligible			Any effects on rare or unusual vegetation will be negligible and lead to long term positive effects on habitat (sah).
11. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat		Negligible			Any effects on special status plants will be negligible and lead to long term positive effects on habitat (sah). Negligible risk to sensitive wildlife. hw
12. Unique ecosystems, biosphere reserves, World Heritage Sites		Negligible			Projects will have a negligble effects that improve the condition of native plant communities in support of the biosphere reserve. JDD
13. Unique or important wildlife or wildlife habitat	No				hw
14. Unique or important fish or fish habitat	No				hw
15. Introduce or promote non-native species (plant or animal)			Minor		Because crews are working within invasive plant infestations, they have significant risk of moving invasive plants to other locations on shoes, clothing, and equipment. However, there is also a beneficial impact of removal of target plants. With

					mitigations, risk of movement is minimized (AD).
16. Recreation resources, including supply, demand, visitation, activities, etc.	No				CSydoriak: same as 17.
17. Visitor experience, aesthetic resources		Negligible			CSydoriak: Some visitors to the parks will encounter work crews and view intermittent evidence of the eradication actions such as tarping.
18. Archeological resources	No				Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
19. Prehistoric/historic structure	No				Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
20. Cultural landscapes	No				Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
21. Ethnographic resources	No				Covers the exotic vegetation management program and the related control, survey, and

					monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
22. Museum collections (objects, specimens, and archival and manuscript collections)	No				n.a. tlb
23. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure	No				CSydoriak
24. Minority and low income populations, ethnography, size, migration patterns, etc.	No				CSydoriak
25. Energy resources					
26. Other agency or tribal land use plans or policies					
27. Resource, including energy, conservation potential, sustainability	No				CSydoriak
28. Urban quality, gateway communities, etc.	No				CSydoriak
29. Long-term management of resources or land/resource productivity			Minor		CSydoriak: invasive plant detection, control and eradication activities will have long-term positive benefits for native resources.
30. Other important	No				CSydoriak

environment resources (e.g. geothermal, paleontological resources)?					

Comments:

D. MANDATORY CRITERIA

Mandatory Criteria: If implemented, would the proposal:	**Yes**	**No**	**N/A**	**Comment or Data Needed to Determine**
A. Have significant impacts on public health or safety?		N		NH
B. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas?		N		Provided that activities in wilderness and within wild and scenic river boundaries are properly analyzed and are compliant with existing law and policy, e.g. MR/MT. GDF
C. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA section 102(2)(E))?		N		CSydoriak--not in my opinion.
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		N		CSydoriak--not in my opinion.
E. Establish a precedent for future action or represent a decision in principle about future actions with		N		CSydoriak--not in my opinion.

potentially significant environmental effects?				
F. Have a direct relationship to other actions with individually insignificant, but cumulatively significant, environmental effects?		N		NH
G. Have significant impacts on properties listed or eligible for listing on the National Register of Historic Places, as determined by either the bureau or office?		N		Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
H. Have significant impacts on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species?		N		hw
I. Violate a federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment?		N		NH
J. Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898)?		N		NH
K. Limit access to and ceremonial use of Indian sacred sites on federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007)?		N		Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb
L. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth,		N		With mitigations (AD).

or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112)?				

For the purpose of interpreting these procedures within the NPS, any action that has the potential to violate the NPS Organic Act by impairing park resources or values would constitute an action that triggers the DOI exception for actions that threaten to violate a federal law for protection of the environment.

E. OTHER INFORMATION

Are personnel preparing this form familiar with the site? **N/A**

Did personnel conduct a site visit? **No** *(If yes, attach meeting notes or additional pages noting when site visit took place, who attended, etc.)*

Is the project in an approved plan such as a General Management Plan or an Implementation Plan with an accompanying NEPA document? **No**

Is the project still consistent with the approved plan? **N/A** *(If no, you may need to prepare plan/EA or EIS.)*

Is the environmental document accurate and up-to-date? **N/A** *(If no, you may need to prepare plan/EA or EIS.)*

FONSI ROD ***(Check)*** Date approved:

Are there any interested or affected agencies or parties? **Yes**

Did you make a diligent effort to contact them? **Yes**

Has consultation with all affected agencies or tribes been completed? **N/A**

Are there any connected, cumulative, or similar actions as part of the proposed action? (e.g., other development projects in area or identified in GMP, adequate/available utilities to accomplish project)? **No**

F. INSTRUCTIONS FOR DETERMINING APPROPRIATE NEPA PATHWAY

First, always check DO-12, section 3.2, "Process to Follow" in determining whether the action is categorically excluded from additional NEPA analyses. Other sections within DO-12, including sections 2.9 and 2.10; 3.5; 4.5(G)(4) and (G)(5), and 5.4(F), should also be consulted in determining the appropriate NEPA pathway. Complete the following tasks: conduct a site visit or ensure that staff is familiar with the site's specifics; consult with affected agencies, and/or tribes; and interested public and complete this environmental screening form.

If your action is described in DO-12 section 3.3, "CE's for Which No Formal Documentation is Necessary," follow the instructions indicated in that section.

If your action is not described in DO-12, section 3.3, and IS described is section 3.4, AND you checked YES or identified "data needed to determine" impacts in any block in section D (Mandatory Criteria), this is an indication that there is potential for significant impacts to the human environment, therefore, you must prepare an EA or EIS or supply missing information to determine context, duration and intensity of impacts.

If your action is described in section 3.4 and NO is checked for all boxes in section D (Mandatory Criteria), and there are either no effects or **all** of the potential effects identified in section C (Resource Effects to Consider) are no more than minor intensity, usually there is no potential for significant impacts and an EA or EIS is not required. If, however, during internal scoping and further investigation, resource effects still remain unknown, or are at the minor to moderate level of intensity, and the potential for significant impacts may be likely, an EA or EIS is required.

In all cases, data collected to determine the appropriate NEPA pathway must be included in the administrative record.

G. INTERDISCIPLINARY TEAM SIGNATORIES

All interdisciplinary team members sign as directed or deemed necessary by the Superintendent. By signing this form, you affirm the following: you have either completed a site visit or are familiar with the specifics of the site; you have consulted with affected agencies and tribes; and you, to the best of your knowledge, have answered the questions posed in the checklist correctly.

Field of Expertise	**Interdisciplinary Team Leader Name**
Project Leader -	Athena Demetry:
Field of Expertise	**Technical Specialists Names**
District FMO S -	David Allen
Fire Management Officer -	Dave Bartlett
Chief of Interpretation, Education, and Partnerships -	Colleen Bathe
Chief of Maintenance and Construction -	Daniel Blackwell
Aquatic Ecologist -	Danny Boiano
NHPA Specialist -	Tom Burge
Fire Ecologist -	Tony Caprio
Geologist -	Joel Despain
Air Resources Specialist -	Annie Esperanza
Wilderness Coordinator -	Gregg Fauth
Public Information Officer -	Adrienne Freeman
Plant Ecologist - Special Status Vegetation -	Sylvia Haultain
NEPA Specialist -	Nancy Hendricks
Chief Ranger -	Kevin Hendricks
Concessions -	Thomas Liu
Safety/Hazmat -	Robert Montgomery

Chief of Business and Administrative Support -	Deb Pfenninger
Chair KCMT -	Brit Rosso
Management Assistant -	Christine Smith
Research Ecologist -	Nate Stephenson
Chief of Resources -	Charisse Sydoriak
Facility Manager (RAT) -	Jerry Torres
Chair SMT -	Jack Vance
Facility Manager (BUG) -	Jack Vance
IPM Coordinator -	Tom Warner
Wildlife Ecologist -	Harold Werner

H. SUPERVISORY SIGNATORY

Based on the environmental impact information contained in the statutory compliance file and in this environmental screening form, environmental documentation for this stage of the subject project is complete.

Recommended:

Compliance Specialist	**Telephone Number**
Nancy E Hendricks 3/10/10	
NEPA--Nancy Hendricks	559-565-3102
NHPA--Tom Burge	559-565-3139

Approved:

Superintendent	**Telephone Number**
Karen f. Taylor-Goodrich	
Karen f. Taylor-Goodrich	559-565-3101
Date 03/15/10	

National Park Service
U.S. Department of the Interior

Sequoia & Kings Canyon NP
Date: 03/13/2010

PARK ESF ADDENDUM PRINT FORM

Today's Date: **March 13, 2010**

(This form should be attached to ESF document sent to the regional director's office for signature. While you may modify this form to fit your needs, you must ensure that the form includes information detailed below and must have your modifications reviewed and approved by the regional environmental coordinator.)

PROJECT INFORMATION

Park Name:	**Sequoia & Kings Canyon NP**
Project Title:	**Invasive and Non-native Vegetation Management Program**
PEPC Project Number:	**29487**
Project Type:	**Resource Management Plan/Site Plan (RMP)**
Project Location:	County, State: **Tulare County, California**
Project Location:	County, State: **Fresno County, California**
Project Leader:	**Athena Demetry**

PARK ESF ADDENDUM QUESTIONS & ANSWERS

ESF Addendum Questions	Yes	No	N/A	Data Needed to Determine/Notes
1. Would there be measurable impacts from the proposed action on night sky outside the natural range of conditions?		X		AME
2. Would there be measurable impacts from the proposed action on major ecological processes (including fire) outside the natural range of conditions?		X		No comment NH
3. Would there be measurable impacts from the proposed action on giant sequoia groves or trees of special interest outside the natural range of conditions?		X		sah

4. Would there be measurable impacts from the proposed action on migratory birds or migratory bird habitat outside the natural range of conditions?		X		hw
5. Would the proposed action have the potential to violate approved park guidelines for architecture?			X	n/a. tlb
6. Are there additional concerns (not addressed above) relating to roads, automobiles, or trails?		X		No comment NH
14. Are there additional concerns (not addressed above) relating to buildings, utilities, or grounds?		X		No comment NH
8. Are there additional concerns (not addressed above) relating to park concessions?		X		No comment NH
9. Are there additional concerns (not addressed above) relating to park wilderness areas (as defined in MD-49) or to wild and scenic rivers?		X		Provided that activities in wilderness and within wild and scenic river boundaries are properly analyzed and are compliant with existing law and policy, e.g. MR/MT. GDF
10. Are there additional concerns (not addressed above) of the district FMO?		X		No comment NH
11. Are there additional concerns (not addressed above) of the respective district management team?		X		No comment NH
12. Are there additional concerns (not addressed above) of the chief ranger?		X		No comment NH

13. Would there be any measureable site disturbance(s) that would cause the need for site restoration?	X			Treatments that kill dense monocultures of invasive plants, such as tarping or herbicide treatment of thatch-forming species like reed canarygrass, may require active revegetation. These activities have been included in implementation plans (AD).
7. Would the proposed action involve the unapproved use of pesticides?		X		TEW
15. Would there be any measureable site disturbance(s) that could create tree hazards?		X		TEW

Other Compliance/Consultations Form

Park Name: **Sequoia & Kings Canyon NP**

Project Number: **29487**

Project Title: **Invasive and Non-native Vegetation Management Program**

Project Type: **Resource Management Plan/Site Plan (RMP)**

Project Location:

County, State: **Tulare County, California**
County, State: **Fresno County, California**

Project Originator/Coordinator: **Athena Demetry**

ESA

Any Federal Species in the project Area? **Yes**

If species in area: No Effect

Was Biological Assessment prepared? No

If Biological Assessment prepared, concurred? __

Formal Consultation required? No

Formal Consultation Notes: _____

Formal Consultation Concluded: _____

Any State listed Species in the Project Area? Yes

Consultation Information: _____

Data Entered By: Harold Werner

ESA Mitigations

No ESA Mitigations are associated with this project.

Floodplains/Wetlands/§404 Permits

Question	Yes	No	Details
A.1. Is project in 100- or 500-year floodplain or flash flood hazard area?	X		Exempt from compliance with executive order: Yes Statement of findings approval date:
A.2. Is project in wetlands?	X		Exempt from compliance with executive order: Yes Statement of findings approval date:
B. COE Section 404 permit needed?		X	Issue Date: Expiration Date: Request Date:
C. State 401 certification?		X	
D. State Section 401 Permit?		X	Issue Date: Expiration Date:
E. Tribal Water Quality Permit?		X	
F. CZM Consistency determination needed?		X	Required Date: Reviewed Date:
G. Erosion & Sediment Control Plan Required?		X	
H. Any other permits required?		X	Permit Information:

Data Entered By: Nancy Hendricks

Floodplains Mitigations

No Floodplains/Wetlands mitigations are associated with this project.

Other Permits/Laws

Question	Yes	No
A. Consistent with Wilderness Act if Wilderness, or Not Applicable otherwise?	X	
B. Wilderness minimum requirement (tool) decision needed?	X	
C. Wild and scenic river concerns exist?	X	
D. National Trails concerns exist?		X
E. Air Quality consult with State needed?		X
F. Consistent with Architectural Barriers, Rehabilitation, and Americans with Disabilities Acts or not Applicable? (If N/A check Yes)	X	
G. Other:		

Other Information:

Projects must be consistent with Wilderness Act and policies and Wild and Scenic River Act requirements (e.g. MRMT when needed).

Data Entered By: Nancy Hendricks

ASSESSMENT OF ACTIONS HAVING AN EFFECT ON CULTURAL RESOURCES

A. DESCRIPTION OF UNDERTAKING

1. Park: **Sequoia & Kings Canyon NP** Park district (optional):

2. Project Description:
a. Project Name **Invasive and Non-native Vegetation Management Program** Date: **March 13, 2010** PEPC project ID no. **29487**
b. Describe project and area of potential effects (as defined in 36 CFR 800.2[c])

Invasive, exotic plant species are the second leading cause worldwide (following habitat destruction) of native biodiversity decline. Exotic plants have the potential to displace native plants and alter the structure and processes of native plant communities. With several highly invasive species currently forming discrete populations within SEKI and several poised along the parks' boundaries, a comprehensive program focused on early detection and eradication will prevent many species from becoming widespread, ecologically damaging, and expensive problems.(SEKI Resource Management Plan, 1999).

Removal of exotic species is consistent with 2006 National Park Service Management Polices (4.4.4.2). "All exotic plant and animal species that are not maintained to meet an identified park purpose will be managed-up to and including eradication-if (1) control is prudent and feasible and, (2) the exotic species:" meets the criteria listed in 4.4.4.2 of the 2006 Management Polices.

See attached table with the invasive plants selected for management that meet these criteria.

This categorical exclusion document (CE) will serve as a formal record for the exotic vegetation management program for 2010 to 2014. The Council on Environmental Quality (CEQ) directs agencies to use CEs for actions "which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement" (40 CFR 1500-1508). This project is categorically exempt under NPS Director's Order #12, Action 3.4 E. 2.: Restoration of noncontroversial native species into suitable habitats within their historic range and the elimination of exotic species.

This project includes control, survey and monitoring of exotic vegetation, follow-up treatment, preventive measures, and data management, using park approved methods (new methods may

require separate compliance package). Work may be conducted by park staff (biologists, rangers, maintenance), VIPS, and partners such as USGS.

Locations include (Parkwide, both frontcountry and wilderness):

- Grant Grove/Wilsonia area
- Cedar Grove area
- Redwood Canyon
- Dorst Campground
- Red Fir/Wuksachi/Lodgepole/Wolverton area
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- Hidden Fire "
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- South Fork Kaweah (blackberry)
- Sugarloaf/Roaring River area
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- Paradise Valley
- Middle Fork of Kaweah
- Kern Canyon

New locations may be added each year as a result of surveys, ground disturbances, and project work.

Methods include:

- Manual (hand-pulling, hand-digging)
- Mowing with weed eaters or mowers
- Treat with herbicide (glyphosate, clopyralid, rimsulfuron) using backpack sprayers and truck-mounted sprayer.
- Tarping (placing black fabric over the infestation for 1 to 2 years)

Timing is generally March to November, periodically throughout this period. Potential Tools and Equipment: - Backpack sprayers (wilderness) - Truck-mounted sprayer - DR Mower - Weed eaters - Helicopter (poss. for removing tarps from wilderness upon project completion) - Stock support to Kern Canyon and Sugarloaf Meadow.

Additional mitigation/BMPs to be utilized: NPS Pesticide Use Permit must be obtained through IPM coordinator. Other methods will be considered before using herbicide. California Laws and Regulations will be followed

Essentially parks-wide.

3. Has the area of potential effects been surveyed to identify cultural resources?

__X__ No

___ Yes, Source or reference: **Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. tlb**

___ Check here if no known cultural resources will be affected. (If this is because area has been disturbed, please explain or attach additional information to show the disturbance was so extensive as to preclude intact cultural deposits.)

4. Potentially Affected Resource(s):

5. The proposed action will: (check as many as apply)

__No__ Destroy, remove, or alter features/elements from a historic structure
__No__ Replace historic features/elements in kind
__No__ Add non-historic features/elements to a historic structure
__No__ Alter or remove features/elements of a historic setting or environment (inc. terrain)
__No__ Add non-historic features/elements (inc. visual, audible, or atmospheric) to a historic setting or cultural landscape
__No__ Disturb, destroy, or make archeological resources inaccessible
__No__ Disturb, destroy, or make ethnographic resources inaccessible
__No__ Potentially affect presently unidentified cultural resources
__No__ Begin or contribute to deterioration of historic features, terrain, setting, landscape elements, or archeological or ethnographic resources
__No__ Involve a real property transaction (exchange, sale, or lease of land or structures)
___ Other (please specify)

6. Measures to prevent or minimize loss or impairment of historic/prehistoric properties:
(Remember that setting, location, and use may be relevant.)

- **Taboose Pass Trail Work - Tom Burge will provide site map to project leader prior to project work. All fill would be obtained away from known sites.**

7. Supporting Study Data:
(Attach if feasible; if action is in a plan, EA or EIS, give name and project or page number.)

Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. Any ground disturbance will require Section 106 compliance. tlb

8. Attachments:
[ ] Maps [ ] Archeological survey, if applicable [ ] Drawings [ ] Specifications [ ] Photographs
[ ] Scope of Work [ ] Site plan [ ] List of Materials [ ] Samples [ ] Other:

Prepared by **Tom Burge** Date: **March 13, 2010** Title: Telephone: **559-565-3139**

B. REVIEWS BY CULTURAL RESOURCE SPECIALISTS

The park 106 coordinator requested review by the park's cultural resource specialist/advisors as indicated by check-off boxes or as follows:

[**X**] 106 Advisor
Name: **Tom Burge**
Date: **01/17/2010**
Comments: **Covers the exotic vegetation management program and the related control, survey, and monitoring of exotic vegetation. Includes follow-up treatment, preventative measures, and data management. tlb**

Check if project does not involve ground disturbance [ ]
Assessment of Effect: _X_ No Historic Properties Affected __ No Adverse Effect __ Adverse Effect
__ Streamlined Review
Recommendations for conditions or stipulations:
Any ground disturbance will require Section 106 compliance. tlb

Doc Method:
No Potential to Cause Effects [800.3(a)(1)]

No Reviews From: **Curator, Archeologist, Historical Architect, Historian, Other Advisor, Anthropologist, Historical Landscape Architect**

C. PARK SECTION 106 COORDINATOR'S REVIEW AND RECOMMENDATIONS

1. Assessment of Effect:

__X__ No Historic Properties Affected _____ No Adverse Effect _____ Adverse Effect

2. Compliance requirements:

[ ] A. STANDARD 36 CFR PART 800 CONSULTATION
Further consultation under 36 CFR Part 800 is needed.

[ ] B. STREAMLINED REVIEW UNDER THE 2008 SERVICEWIDE PROGRAMMATIC AGREEMENT (PA)

The above action meets all conditions for a streamlined review under section III of the 2008 Servicewide PA for Section 106 compliance.

APPLICABLE STREAMLINED REVIEW Criteria
(Specify 1-16 of the list of streamlined review criteria.)

[ ] C. PLAN-RELATED UNDERTAKING

Consultation and review of the proposed undertaking were completed in the context of a plan review process, in accordance with the 2008 Servicewide PA and 36 CFR Part 800.
Specify plan/EA/EIS: _____

[ ] D. UNDERTAKING RELATED TO ANOTHER AGREEMENT
The proposed undertaking is covered for Section 106 purposes under another document such as a statewide agreement established in accord with 36 CFR 800.7 or counterpart regulations.
Specify: _____

[ ] E. COMPLIANCE REQUIREMENTS SATISFIED BY USE OF NEPA
Documentation is required for the preparation of an EA/FONSI or an EIS/ROD has been developed and used so as also to meet the requirements of 36 CFR 800.3 through 800.6

[**X**] F. No Potential to Cause Effects [800.3(a)(1)]

[ ] G. STIPULATIONS/CONDITIONS
Following are listed any stipulations or conditions necessary to ensure that the assessment of effect above is consistent with 36 CFR Part 800 criteria of effect or to avoid or reduce potential adverse effects.

Recommended by Park Section 106 coordinator:
Name: **Tom Burge**
Title: **NHPA Specialist**
Date:

D. SUPERINTENDENT'S APPROVAL

The proposed work conforms to the NPS *Management Policies* and *Cultural Resource Management Guideline*, and I have reviewed and approve the recommendations, stipulations, or conditions noted in Section C of this form.

Name/Signature of Superintendent _____

Date: 03/15/10

National Park Service
U.S. Department of the Interior

Sequoia & Kings Canyon NP
Date: 03/13/2010

Categorical Exclusion Form

Project: Invasive and Non-native Vegetation Management Program

PEPC Project Number: 29487

Project Description: Invasive, exotic plant species are the second leading cause worldwide (following habitat destruction) of native biodiversity decline. Exotic plants have the potential to displace native plants and alter the structure and processes of native plant communities. With several highly invasive species currently forming discrete populations within SEKI and several poised along the parks' boundaries, a comprehensive program focused on early detection and eradication will prevent many species from becoming widespread, ecologically damaging, and expensive problems.(SEKI Resource Management Plan, 1999). Removal of exotic species is consistent with 2006 National Park Service Management Polices (4.4.4.2). "All exotic plant and animal species that are not maintained to meet an identified park purpose will be managed-up to and including eradication-if (1) control is prudent and feasible and, (2) the exotic species:" meets the criteria listed in 4.4.4.2 of the 2006 Management Polices.

See attached table with the invasive plants selected for management that meet these criteria.

This categorical exclusion document (CE) will serve as a formal record for the exotic vegetation management program for 2010 to 2014. The Council on Environmental Quality (CEQ) directs agencies to use CEs for actions "which do not individually or cumulatively have a significant effect on the human environment and which are therefore exempt from requirements to prepare an environmental impact statement" (40 CFR 1500-1508). This project is categorically exempt under NPS Director's Order #12, Action 3.4 E. 2.: Restoration of noncontroversial native species into suitable habitats within their historic range and the elimination of exotic species.

This project includes control, survey and monitoring of exotic vegetation, follow-up treatment, preventive measures, and data management, using park approved methods (new methods may require separate compliance package). Work may be conducted by park staff (biologists, rangers, maintenance), VIPS, and partners such as USGS.

Locations include (Parkwide, both frontcountry and wilderness):

- Grant Grove/Wilsonia area
- Cedar Grove area
- Redwood Canyon

- Dorst Campground
- Red Fir/Wuksachi/Lodgepole/Wolverton area
- Giant Forest
- Recent fires
- Hidden Fire "
- Yucca Creek/Grunnigans Ranch (blackberry)
- South Fork Kaweah (blackberry)
- Sugarloaf/Roaring River area
- Bubbs Creek
- Paradise Valley
- Middle Fork of Kaweah
- Kern Canyon

New locations may be added each year as a result of surveys, ground disturbances, and project work.

Methods include:

- **Manual (hand-pulling, hand-digging)**
- **Mowing with weed eaters or mowers**
- **Treat with herbicide (glyphosate, clopyralid, rimsulfuron) using backpack sprayers and truck-mounted sprayer.**
- **Tarping (placing black fabric over the infestation for 1 to 2 years)**

Timing is generally March to November, periodically throughout this period. Potential Tools and Equipment: - Backpack sprayers (wilderness) - Truck-mounted sprayer - DR Mower - Weed eaters - Helicopter (poss. for removing tarps from wilderness upon project completion) - Stock support to Kern Canyon and Sugarloaf Meadow.

Additional mitigation/BMPs to be utilized: NPS Pesticide Use Permit must be obtained through IPM coordinator. Other methods will be considered before using herbicide. California Laws and Regulations will be followed

(See Attached Environmental Screening Form)

Mitigation(s):

Weed Prevention Best Management Practices

- Tools. Thoroughly inspect and clean dirt, mud, and plant parts from tools (shovels, pulaskis, winches, saws, weed eaters, etc) prior to mobilizing to a new job site, particularly when moving within the foothills or from a lower to higher elevation. A sufficient cleaning typically involves scrub brushes and picks to get out all seeds. Pay particular attention to chainsaws and other types of fast action equipment that have compartments that transport seed. Once mobilized, inspect and clean tools ON SITE, before leaving a job site.

- Tools/Crews: Utilize a separate set of tools and boots for crews working within highly invasive and risky infestations, such as reed canarygrass or velvet grass, particularly if those tools or boots could be used in a clean restoration project, such as Halstead Meadow. Do not re-use tarps from Grant Grove (reed canarygrass) in the Kern Canyon for velvet grass. Keep these tarps in their original location.
- Crews. Inspect and clean shoes, clothing and camping equipment of dirt, mud, and plant parts before mobilizing to a new job site, particularly when moving from lower to higher elevations. Clean shoes and lower extremities prior to leaving job site, particularly if there are known weed infestations in area.
- Taboose Pass Trail Work - Tom Burge will provide site map to project leader prior to project work. All fill would be obtained away from known sites.
- Mowers and weed eaters should all be 4-cycle to reduce emissions.
- If doing activities near privately owned or occupied areas provide information to concerned external parties
- Activities in wilderness and within wild and scenic river boundaries are properly analyzed and are compliant with existing law and policy, e.g. MR/MT.

Describe the category used to exclude action from further NEPA analysis and indicate the number of the category (see Section 3-4 of DO-12):

E.2 Restoration of noncontroversial native species into suitable habitats within their historic range and elimination of exotic species.

(See Attached Environmental Screening Form)

On the basis of the environmental impact information in the statutory compliance file, with which I am familiar, I am categorically excluding the described project from further NEPA analysis. No exceptional circumstances or conditions in Section 3-6 apply, and the action is fully described in Section 3-4 of DO-12.

Park Superintendent / Date: _____ 03/15/10

NPS Contact Person: _____Athena Demetry_____

Mitigations List Form

Date: **March 13, 2010**

Park: **Sequoia & Kings Canyon NP**

Project: **Invasive and Non-native Vegetation Management Program**

ProjectID/PIN: **29487**

Mitigation(s):
(the following is a complete list of all mitigations that will be incorporated into the above-referenced project)

Weed Prevention Best Management Practices

- Tools. Thoroughly inspect and clean dirt, mud, and plant parts from tools (shovels, pulaskis, winches, saws, weed eaters, etc) prior to mobilizing to a new job site, particularly when moving within the foothills or from a lower to higher elevation. A sufficient cleaning typically involves scrub brushes and picks to get out all seeds. Pay particular attention to chainsaws and other types of fast action equipment that have compartments that transport seed. Once mobilized, inspect and clean tools ON SITE, before leaving a job site.
- Tools/Crews: Utilize a separate set of tools and boots for crews working within highly invasive and risky infestations, such as reed canarygrass or velvet grass, particularly if those tools or boots could be used in a clean restoration project, such as Halstead Meadow. Do not re-use tarps from Grant Grove (reed canarygrass) in the Kern Canyon for velvet grass. Keep these tarps in their original location.
- Crews. Inspect and clean shoes, clothing and camping equipment of dirt, mud, and plant parts before mobilizing to a new job site, particularly when moving from lower to higher elevations. Clean shoes and lower extremities prior to leaving job site, particularly if there are known weed infestations in area.
- Taboose Pass Trail Work - Tom Burge will provide site map to project leader prior to project work. All fill would be obtained away from known sites.
- Mowers and weed eaters should all be 4-cycle to reduce emissions.
- If doing activities near privately owned or occupied areas provide information to concerned external parties
- Activities in wilderness and within wild and scenic river boundaries are properly analyzed and are compliant with existing law and policy, e.g. MR/MT.

NEPA COMPLIANCE CHECKLIST
internal use only

Sequoia National Forest
Western Divide Ranger District

Name of Project: Velvet Grass Eradication Project (in conjunction with SEKI)

Description of Project: Velvet grass is a non native invasve species occuring throughout California. Four infestations (3 acres total) have been mapped around Kern lakes on the Sequoia National Forest. On the Sequoia National Park side to the north, 41 infestations (16.8 acres) have been found. This project will use two methods to eradicate velvet grass (Holcus lanatus) from scattered areas in the Golden Trout Wilderness: hand pulling and tarping. The Sequoia and Kings Canyon National Park (SEKI) have been using these methods to eradicate velvetgrass for the past three years. Because velvet grass occurs on the Forest, SEKI does not permit stock to enter the park from the Forest (Old Hockett Trail, 33E14). Treating both the Forest and the Park will be more effective. The park employees will do the work to be more efficient with the cost and use people already trained to do the work.

Purpose of Checklist: For projects categorically excluded under NEPA that do not require a decision memo, this checklist documents that there are no extraordinary circumstances related to the proposed action that warrant further analysis and documentation in an environmental assessment or environmental impact statement.

Applicable Categorical Exclusions for Projects Not Requiring a Decision Memo For full description of each category and examples refer to FSH 1909.15, Chapter 30.			
31.11 Categories Established by the Secretary 7 CRF 2b.3(a)		31.12 Categories Established by the Chief 36 CFR 220.6(d)	
	(1) Policy admin. development/planning		(1) Prohibit for resource protection
	(2) Activities related to funding/money		(2) Admin procedures, processes, instructions
	(3) Inventories, research activities, studies		(3) Repair/maintain Admin. Sites
	(4) Educational and information activities	X	(4) Repair/maintain roads, trails, landlines
	(5) Law enforcement and investigation		(5) Repair/maintain Rec. Sites/Facilities
	(6) Advisory or consultative activities		(6) Acquisiton of land or interest in land.
	(7) Trade representation/market develop		(7) Sale or exchange of land with same land use
			(8) Approve/modify/continue less than 1 year Special Use Permit
			(9) New Permit for exisiting ski area for administrative changes only
			(10) Amend/Replace exisitng Special Use Permit for administrative changes only
31.4 Statutory NEPA Exception			
	16 USC 6236 – Organization Camp Special Use Authorization		

Determination of Extraordinary Circumstances for the Proposal 36 CFR 220.6(a)				
Resource Conditions 36 CFR 220.6(b)	Resource Condition Present?		For Resource Conditions that are Present, the following Findings are made:	Reference material used to support finding of no extraordinary circumstance
	Yes	No		
Proposed, Threatened, or Endangered **Terrestrial Wildlife Species** or Their Designated or Proposed Critical habitat, or FS sensitive wildlife species		X	No P, T, E or S wildlife species or critical habitats will be adversely affected by this proposal. No extraordinary circumstances exist for this resource condition.	
Proposed, Threatened, or Endangered **Aquatic Species** or Their Designated or Proposed Critical habitat, or FS sensitive aquatic species .		X	No P, T, E or S Fish, Amphibians or Macroinvertibrates or critical habitats will be adversely affected by this proposal. No extraordinary circumstances exist for this resource condition.	
Proposed, Threatened, or Endangered **Plant Species** or Their Designated or Proposed Critical habitat, or FS sensitive plant species		X	No P, T, E or S plant species will be adversely affected by this action. No extraordinary circumstances exist for this resource condition.	
Floodplains, wetlands or municipal watersheds	X		No floodplains, wetlands or municipal watersheds will be adversely affected by this action. No extraordinary circumstances exist for this resource condition.	Follow BPMs: 5-7, 5-8, 5-9, 5-10, 5-11, 5-12, 5-13
Congressionally designated wilderness, wilderness study areas, or National Recreation Areas	X		No Congressionally designated areas will be adversely affected by this action. No extraordinary circumstances exist for this resource condition.	Mitigation measures taken to remove all foreign materials post implementation
Inventoried Roadless Areas		X	IRAs will not be adversely affected by this action. No extraordinary circumstances exist for this resource condition.	
Research Natural Areas		X	RNAs will not be adversely affected by this action.OHV use not allowed in wilderness/no routes exist No extraordinary circumstances exist for this resource condition.	
American Indians and Alaska Native religious or cultural sites	X		Implementation of the Proposed Action would not adversely affect American Indian religious or cultural sites. No extraordinary circumstances exist for this resource condition.	Site survey during implememtation; mitigation measures taken when identified
Archaeological sites, or historic properties or areas	X		No archeological sites or sites eligible for National Historic Register listing will be adversely affected by this proposal. No extraordinary circumstances exist for this resource condition.	Site survey during implememtation; mitigation measures taken when identifie

I have considered the above listed resource conditions and determined there are no extraordinary circumstances related to the proposed action that warrant further analysis and documentation in an EA or EIS. None of the extraordinary circumstances described in 36 CFR 220.6 (b) exist.

Signature _____ **Date** 6/15/11

PRISCILLA R. SUMMERS
District Ranger

ARTHUR CARHART NATIONAL WILDERNESS TRAINING CENTER

MINIMUM REQUIREMENTS DECISION GUIDE

WORKSHEETS

". . . except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act..."

– the Wilderness Act, 1964

Please refer to the accompanying MRDG *Instructions* for filling out this guide.
The spaces in the worksheets will expand as necessary as you enter your response.

The MRDG Instructions may be found at: http://www.wilderness.net/mrdg/

Project Title: **Velvet Grass Eradication Project**

Step 1: Determine if any administrative action is necessary.

Description: Briefly describe the situation that may prompt action.

Velvet grass is a non-native invasive species occurring throughout California, introduced by past human actions as well as natural forces. Four infestations (3 acres total) have been mapped around Kern Lake and Little Kern Lake within the Golden Trout Wilderness Area on the Sequoia National Forest. A map is attached showing specific sites. Velvet grass has also been found in 41 locations (16.8 acres) in the Sequoia National Park, which lies to the north of the Golden Trout Wilderness. The Park is presently treating Velvet Grass in their area. While infestation remains in the Golden Trout Wilderness there is a high likelihood that velvet grass will re-spread to the north back into the park via recreation users along trail corridors, and natural spread via wind and wildlife are all contributing factors.

To determine if administrative action is necessary, answer the questions listed in A - F on the following pages by answering Yes, No, or Not Applicable and providing and explanation.

A. Describe Options Outside of Wilderness

Is action necessary within wilderness?

Yes: ☒ **No:** ☐

Explain:

Control or containment activities outside the wilderness are important, but will not be sufficient. The infestation has entered the wilderness and it is likely to spread further into the wilderness each year. The area inside the wilderness must be treated in order to have any effect on spread of the noxious weed.

B. Describe Valid Existing Rights or Special Provisions of Wilderness Legislation

Is action necessary to satisfy valid existing rights or a special provision in wilderness legislation (the Wilderness Act of 1964 or subsequent wilderness laws) that allows or requires consideration of the Section 4(c) prohibited uses? Cite law and section.

Yes: ☒ **No:** ☐ **Not Applicable:** ☐

Explain:

There are no valid existing rights or special provisions in The Wilderness Act (1964) that specifically allows consideration of any of the Section 4c prohibited uses. However, the following sections form the basis for the analysis.

Section 2 (a) Wilderness "shall be administered ... in such manner as will leave them unimpaired for future use as wilderness, and so as to provide for the protection of these areas [and] the preservation of their wilderness character..."

Section 2 (c) An area of wilderness is...an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitation, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable..."
Definition of wilderness:

Section 4 (c) Prohibition of certain uses
"...except as necessary to meet minimum requirements for the administration of the area for the purpose of this Act...there shall be no temporary road, no use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area."

C. Describe Requirements of Other Legislation

Is action necessary to meet the requirements of other laws?

Yes: ☒ **No:** ☐ **Not Applicable:** ☐

Explain:

Noxious Weeds Act of 1974 designates the FS as the lead agency for noxious weed coordination for USDA and requires establishment of integrated management.

The Executive Order of February 3, 1999 titled *Invasive Species* requires federal agencies to detect NNIS and respond quickly to infestations.

D. Describe Other Guidance

Is action necessary to conform to direction contained in agency policy, unit and wilderness management plans, species recovery plans, or agreements with tribal, state and local governments or other federal agencies?

Yes: ☒ **No:** ☐ **Not Applicable:** ☐

Explain:

Forest Service National Weed Management Strategy – Four primary goals of Integrated Weed Management are: 1) increase the understanding and awareness, 2) develop and implement integrated weed management at all levels, 3) institutionalize consideration of noxious weeds during the planning phase of projects, 4) develop strong partnerships.

Forest Invasive Species Action Plan

FS policy on Environmental Management – FSM 2150

Environmental Assessment for Management of Noxious Weeds - PSICC

Non-native invasive species are one of the Chief's 4 Threats to the health of the national forest system. 2150.3 (3) – Use pesticides in wilderness only when necessary to protect or restore significant resource values within wilderness or on public or private lands bordering wilderness after receipt of the public or private landowner's permission.

2151.04a (1) – Regional Foresters. Regional Foresters are responsible for reviewing and approving or disapproving all proposed pesticide uses on National Forest System lands. The Regional Forester may delegate this authority to other line officers on a case-by-case basis or by supplement to this code, except for the following:

1. Any pesticide use in Wilderness, which includes Wilderness study areas.

Forest Service Policy on Wilderness Management - FSM 2320

2320.3 - Policy

1. Where there are alternatives among management decisions, wilderness values shall dominate over all other considerations except where limited by the Wilderness Act, subsequent legislation, or regulations.
2. Manage the use of other resources in wilderness in a manner compatible with wilderness resource management objectives.

2320.2 - Objectives

2. Maintain wilderness in such a manner that ecosystems are unaffected by human manipulation and influences so that plants and animals develop and respond to natural forces.

2320.5 - Definitions

10. Indigenous Species. Any species of flora or fauna that naturally occurs in a wilderness area and that was not introduced by man.

11. Native Species. Any species of flora or fauna that naturally occurs in the United States and that was not introduced by man.

12. Naturalized Species. Any non-indigenous species of flora or fauna that is close genetically or resembles an indigenous species and that has become established in the ecosystem as if it were an indigenous species.

13. Exotic Species. Any species that is not indigenous, native, or naturalized.

2323.04c – Regional Forester. Unless specifically reserved to the President (FSM 2323.04a_ or the Chief (FSM 2323.04b) or assigned to the Forest Supervisor (FSM 2323.04d) or the District Ranger (FSM 2323.04e), the Regional Forester is responsible for approving all measures that implement FSM direction on the use of other resources in wilderness. Specific responsibilities include but are not limited to:

9. Approving the use of pesticides within wilderness.

Note – The Federal Insecticide, Fungicide, and Rodenticide Act of 1947 definition of 'pesticide' includes 'herbicides.'

E. Wilderness Character

Is action necessary to preserve one or more of the qualities of wilderness character including: Untrammeled, Undeveloped, Natural, Outstanding opportunities for solitude or a primitive and unconfined type of recreation, or other unique components that reflect the character of this wilderness area?

Untrammeled: **Yes:** ☐ **No:** ☒ **Not Applicable:** ☐

Explain: Untrammeled means management, manipulation or hindrance of natural processes. Action is not necessary to preserve the untrammeled quality of wilderness character. Action to treat the existing velvet grass would be a trammeling of wilderness because it represents human control and manipulation of natural processes. This must be weighed against the benefits of restoring more natural conditions.

Undeveloped: **Yes:** ☐ **No:** ☐ **Not Applicable:** ☒

Explain: No structures of installations or use of motorized equipment or mechanical transport are proposed.

Natural: **Yes:** ☒ **No:** ☐ **Not Applicable:** ☐

Explain: The presence of non-native invasive plants (noxious weeds) interferes with the natural conditions of the wilderness resource. Whether any action is taken or not, the natural conditions of wilderness are threatened. The spread of noxious weeds in the wilderness area is partly caused or enhanced by human actions (seed introduction, spread along trails and in campsites, etc.). To allow it to continue spreading would be a direct sign of unintentional human influence.

Outstanding opportunities for solitude or a primitive and unconfined type of recreation:

Yes: ☒ **No:** ☐ **Not Applicable:** ☐

Explain: The wilderness recreation experience is in part dependent on the wilderness setting representing a natural and native ecosystem. If velvet grass is allowed to spread and eventually replace native vegetation the human experience in wilderness will be affected. The effects include changes in vegetation type and also habitat and the fish and wildlife species that depend on the natural conditions.

Other unique components that reflect the character of this wilderness:

Yes: ☐ **No:** ☐ **Not Applicable:** ☒

Explain: None identified for this area.

F. Describe Effects to the Public Purposes of Wilderness

Is action necessary to be consistent with one or more of the public purposes for wilderness (as stated in Section 4(b) of the Wilderness Act) of recreation, scenic, scientific, education, conservation, and historical use?

Recreation: **Yes:** ☒ **No:** ☐ **Not Applicable:** ☐

Explain: It can be argued that the presence and spread of velvet grass in wilderness will degrade the quality of the recreation experience in wilderness as native species are replaced. This may happen due to the changes in vegetation and effects on scenery, habitat, and capacity for grazing of recreation livestock.

Scenic: **Yes:** ☒ **No:** ☐ **Not Applicable:** ☐

Explain: Noxious weeds have the potential to lower the scenic quality of an area.

Scientific: **Yes:** ☐ **No:** ☒ **Not Applicable:** ☒

Explain: Noxious weeds may have the potential to alter ecosystems species diversity, and distribution. It is possible that this could affect future studies of the natural conditions and processes but it is not a reason to take action.

Education: **Yes:** ☐ **No:** ☐ **Not Applicable:** ☒

Explain: There is no unique or direct educational value to treating weeds in this wilderness.

Conservation: **Yes:** ☒ **No:** ☐ **Not Applicable:** ☐

Explain: Noxious weeds tend to interfere with the growth of native species and may actually cause populations of natural species to decline and degrade the habitat for native fish and wildlife species.

Historical use: **Yes:** ☒ **No:** ☐ **Not Applicable:** ☐

Explain: Noxious weeds have the potential to reduce domestic grazing capacities where cattle and sheep allotments were established prior to the establishment of the wilderness area.

Step 1 Decision: Is any administrative action necessary in wilderness?

Yes: ☒ **No:** ☐ **More information needed:** ☐

Explain:

Without some sort of control, the infestation is almost certain to spread and grow many times larger. As a result, the infestation may never be contained and a permanent conversion of vegetation type may occur.

Confinement to the existing areas is critical and essential if eradication is ever going to be possible. Spread beyond the existing areas would threaten the remainder of the wilderness, National Forest and National Park lands and movement beyond the wilderness could go into adjacent non-infested agricultural lands in the valleys below.

The existing infestations are still relatively small and containable and the spread vectors are known and can be managed. Threats to adjacent lands are significant. Because velvet grass is not native and can be controlled the decision is to take action and "trammel" the wilderness to protect the natural quality of its' wilderness character.

If action is necessary, proceed to Step 2 to determine the minimum activity.

Step 2: Determine the minimum activity.

Please refer to the accompanying MRDG *Instructions* for information on identifying alternatives and an explanation of the effects criteria displayed below.

Description of Alternatives

For each alternative, describe what methods and techniques will be used, when the activity will take place, where the activity will take place, what mitigation measures are necessary, and the general effects to the wilderness resource and character.

Alternative # 1

Description:
Herbicide application would be by backpack. Non-mechanical transport methods (foot and stock travel) would be used to move herbicide, people, and supplies to treatment areas and non-motorized spraying equipment would be used for application of the herbicide

Effects:

Wilderness Character

"Untrammeled" – Treatment reduces the untrammeled quality of wilderness because it is human control and manipulation of the wilderness resource.

"Undeveloped" – There is no effect on the undeveloped quality of wilderness character because there is no use of motor equipment.

"Natural" – Effective treatment would enhance the natural quality by restoring native vegetation and reducing the influence of non-native species on all components of the wilderness resource. The use of herbicides introduces a chemical into the natural environment and is an adverse effect on the natural quality.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation" – In the short term, the presence of treatment crews using herbicides may adversely affect the wilderness experience of those in the area. In the long term, the restoration of native vegetation will serve to enhance the wilderness recreation experience.

Heritage and Cultural Resources

None identified

Maintaining Traditional Skills

This option helps maintain skills for use of traditional tools (travel by foot and stock).

Special Provisions
None

Safety of Visitors, Personnel, and Contractors
There is a risk to crews from working with herbicides and from tools, stock and travel over rugged terrain. Effects on visitors can be minimized by making the areas and times of treatment known.

Economic and Time Constraints
Implementing the herbicide treatment will decrease the project time and cost compared to other treatments. Herbicide applications by backpack are effective.

Additional Wilderness-specific Comparison Criteria
None identified.

Alternative # 2

Description: Hand Pulling Only

This alternative would use hand-pulling as the only treatment method. No mechanical transport or herbicides would be used. Hand tills would result in 3 inches of soil disturbance (removing sod), which leaves the soil vulnerable for re-invasion by velvet grass or invasion by bull thistle.

Effects:

Wilderness Character
"Untrammeled" – Treatment reduces the untrammeled quality of wilderness because it is human control and manipulation of the wilderness resource.
"Undeveloped" – There is no effect on the undeveloped quality of wilderness character because there is no use of motorized equipment.
"Natural" – Effective treatment would enhance the natural quality by restoring native vegetation and reducing the influence of non-native species on all components of the wilderness resource.
"Outstanding opportunities for solitude or a primitive and unconfined type of recreation" – In the short term, the presence of treatment crews may adversely affect the wilderness experience of those in the area. This effect may be greater than the herbicide alternative because crews will need to repeat the treatment many times over several years but it may also be less for some visitors because no herbicides are used. In the long term, the restoration of native vegetation will serve to enhance the wilderness recreation experience.

Heritage and Cultural Resources
None identified

Maintaining Traditional Skills
This option helps maintain skills for use of traditional tools (travel by foot and stock).

Special Provisions
None

Safety of Visitors, Personnel, and Contractors
There is a risk to crews from working with tools and stock, and from travelling over rugged terrain. There is a risk to crews in that some noxious weeds contain substances that may cause slight reactions when exposed to skin. The risk of severe injury may be less than alternatives that involve herbicide use. Effects on visitors can be minimized by making the areas and times of treatment known.

Economic and Time Constraints

Implementing the hand-pulling treatment will increase the project time needed and may be less cost effective than alternatives that include herbicide treatment. Hand-pulling alone is far less effective than herbicides because soil is exposed for invasion by bull thistle (a non-native invasive) or reinvasion by velvet grass. Repeated treatments might be required. Hand-pulling would require additional time and labor costs.

Additional Wilderness-specific Comparison Criteria

None identified.

Alternative # 3

Description: Tarping

This alternative would use black woven geotextile tarps to smother infestations over a 2-3 year period. Tarps would camouflaged to blend in with surroundings.

Effects:

Wilderness Character

"Untrammeled" –Treatment reduces the untrammeled quality of wilderness because it is human control and manipulation of the wilderness resource.

"Undeveloped" – There is no effect on the undeveloped quality of wilderness character.

"Natural" – Effective treatment would enhance the natural quality by restoring native vegetation and reducing the influence of non-native species on all components of the wilderness resource.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation" – Tarps would need to remain in place for 2-3 years, which may adversely affect the wilderness experience of visitors through visual impact. This effect may be greater than the herbicide alternative because of its semi-permanent nature but it may also be less for some visitors because no herbicides are used. In the long term, the restoration of native vegetation will serve to enhance the wilderness recreation experience.

Heritage and Cultural Resources

None identified

Maintaining Traditional Skills

This option helps maintain skills for use of traditional tools (travel by foot and stock).

Special Provisions

None

Safety of Visitors, Personnel, and Contractors

There is a risk to crews from working from travelling over rugged terrain.

There is a risk to crews in that some noxious weeds contain substances that may cause slight reactions when exposed to skin. The risk of severe injury may be less than alternatives that involve herbicide use.

Economic and Time Constraints

Implementing the tarp treatment will require 2-3 years, thereby requiring multi-year funding.

Additional Wilderness-specific Comparison Criteria

None

Alternative # 4

Description: Herbicide Application, Hand Pulling and Tarping. This alternative would be a combination of alternatives 1, 2 and 3.

Herbicides would be used for control of infestations over 20 square meters. Application would be by backpack sprayers. Non-mechanical transport methods (foot and stock travel) would be used to move herbicide, people, and supplies to treatment areas and non-motorized spraying equipment would be used for application of the herbicide. Use of herbicide would minimize soil disturbance, thereby reducing the risk of reinvasion from bull thistle.

Hand-pulling would be used for infestations under 20 square meters or areas within 25 feet of water.

Black woven geotextile tarping would be used in areas away from trails/human sight in order to minimize both the visual impact on visitors and herbicide use. Tarps will be camouflaged after installation.

Effects:

Wilderness Character

"Untrammeled" – Treatment reduces the untrammeled quality of wilderness because it is human control and manipulation of the wilderness resource.

"Undeveloped" – There is no effect on the undeveloped quality of wilderness character because there is no use of motor equipment.

"Natural" – Effective treatment would enhance the natural quality by restoring native vegetation and reducing the influence of non-native species on all components of the wilderness resource. The use of herbicides introduces a chemical into the natural environment and is an adverse effect on the natural quality. However, in this alternative, herbicides are used only where necessary for effective treatment.

"Outstanding opportunities for solitude or a primitive and unconfined type of recreation" – In the short term, the presence of treatment crews using herbicides may adversely affect the wilderness experience of those in the area. In those areas treated by hand-pulling the effect may be greater because crews will need to repeat the treatment many times over several years. In the long term, the restoration of native vegetation will serve to enhance the wilderness recreation experience.

Heritage and Cultural Resources

None identified

Maintaining Traditional Skills

This option helps maintain skills for use of traditional tools (travel by foot and stock).

Special Provisions

None

Safety of Visitors, Personnel, and Contractors

There is a risk to crews from working with herbicides and from using tools and stock and for traveling over rugged terrain. There is a risk to crews in that some noxious weeds contain substances that may cause slight reactions when exposed to skin. Effects on visitors can be minimized by making the areas and times of treatment known.

Economic and Time Constraints

Implementing the herbicide treatment and hand-pulling will decrease the project time needed when compared to other treatments such as managed grazing or hand-pulling alone.

Additional Wilderness-specific Comparison Criteria

None identified.

Comparison of Alternatives

It may be useful to compare each alternative's positive and negative effects to each of the criteria in tabular form, keeping in mind the law's mandate to "preserve wilderness character."

	Alternative 1 Herbicides	Alternative 2 Hand-pulling	Alternative 3 Tarping	Alternative 4 Herbicides, Hand-Pulling, Tarping
Untrammeled	-	-	-	-
Undeveloped	+	+	+	+
Natural	+/-	-	-	++/-
Solitude or Primitive Recreation	+/-	+/-	-	+/-
Unique components	N/A	N/A	N/A	N/A
WILDERNESS CHARACTER	+++/---	++/---	+/---	++++/---

	Alternative 1 Herbicides	Alternative 2 Hand-pulling	Alternative 3 Managed Grazing	Alternative 4 Herbicides, Hand-Pulling, Tarping
Heritage & Cultural Resources	N/A	N/A	N/A	N/A
Maintaining Traditional Skills	+	+	+	+
Special Provisions	N/A	N/A	N/A	N/A
Safety	-	-	+	-
Economics & Time	+	-	--	+/-
Additional Wilderness Criteria	N/A	N/A	N/A	N/A
OTHER CRITERIA SUMMARY	++/-	+/--	++/--	++/--

Step 2 Decision: What is the Minimum Activity?

Selected alternative: Alternative #4

Use of herbicide by backpack spraying, will be the treatment method for infestations over 20 square meters. Hand pulling will be used to treat knapweed. Non-mechanical transport (foot and horse) means will be used to move herbicide, people and supplies to treatment areas. When possible, high use periods of recreation will be avoided and only weekday treatments operations will be implemented. Hand-pulling will be used to treat areas under 20 square meters or within 25 feet of water.

Rationale for selecting this alternative:

This alternative provides the most effective control in terms of cost, length of treatment, an impact on wilderness character.

Rationale for not selecting the other alternatives:

- Hand-pulling is an effective treatment for small infestations of velvet grass, but in larger infestation sites would expose large amounts of soil, increasing the likelihood of re-infestation.
- Herbicide is effective but use should be minimized to reduce human safety and aquatic impacts.
- Tarping would require multiple years of treatment and have a high level of visual impact on the wilderness character.

Monitoring and reporting requirements:

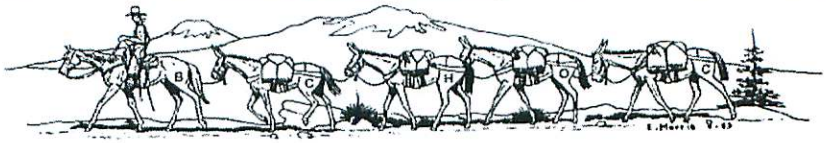
Monitoring of all treatment areas will be conducted in all areas to determine effectiveness and minimize future treatments.

Record and report any authorizations of Wilderness Act Section 4(c) uses according to agency procedures.

Approvals	Signature	Name	Position	Date
Prepared by:		Rebecca Brooke	Acting Recreation & Wilderness Officer, Western Divide Ranger District	7/20/11
Recommended:		Priscilla Summers	District Ranger, Western Divide	7/20/11
Recommended:		Deb Whitman	Acting Forest Supervisor, Sequoia NF	7/21/11
Approved:				8/2/11

C Boston 7/22/11

High Sierra Unit of the Backcountry Horsemen of California



18Jan12

Sierra Nevada Conservancy
351 Pacu Ln., Ste.200
Bishop, CA 93514

Dear Sierra Nevada Conservancy,

Hello, my name is Bob Herrick, and I am the President of the High Sierra Chapter of the Backcountry Horsemen of California. I am writing in support for the grant proposal from Sequoia and Kings Canyon National Park to conduct treatments to eradicate Velvet grass from Wet Meadows of the Sequoia National Forest, California adjacent to the Park. One of the key components of this effort is to support the efforts already accomplished to reduce velvet grass and prevent spreading by establishing native species. Velvet grass is invading riparian wetland habitats and montane meadows. These wetlands are centers of plant and animal diversity and are important for the functioning of larger upland ecosystems. As stakeholders, the Velvet grass has adversely impacted us, as it has caused grazing restrictions that have restricted our use of the resource.

In the Kern River area of the Sequoia National Forest, Velvet grass (*Holcus lanatus*) is a perennial grass, native to Europe, that was introduced to California as livestock feed. It escaped from cultivation and has become a weed species, In Sequoia and Kings Canyon National Parks, it is found in moist meadows and riparian sites in only a few locations, where it establishes dense patches that exclude native vegetation. For the past three summers our unit has aided in the eradication effort of this species by providing logistical support to the ACE crews, by packing in all of their necessary supplies.

Its rapid growth and highly competitive nature makes it a serious threat to these systems by displacing native plant species. The replacement of native plant communities with a monoculture of velvet grass can cause a decrease in habitat quality and wildlife diversity. This has a negative impact on the health of the meadows, and our ability to enjoy their use.

It is important to curb this invasive species and restore these habitats in all locations where they occur. Therefore, our unit fully supports this effort and hope that it can be funded through your grant program. Thank you.

Sincerely,

Bob Herrick

Bob Herrick

P.O. Box 6938
Visalia, CA 93290
www.highsierraunit.org

LONG TERM MANAGEMENT AND SUSTAINABILITY

Both Sequoia National Park and Sequoia National Forest management plans require management of invasive, non-native plants. In addition, Sequoia and Kings Canyon National Parks also has a Management Directive (No. 38) that requires preventing the spread of invasive species. At the conclusion of this project, crews will continue to monitor the areas to ensure that velvetgrass is fully eradicated and remove any velvetgrass individuals. Base-funded positions will then be used to monitor the area on a consistent basis. Invasive plant crews and meadow monitoring crews from the NPS, as well as USFS botanical crews, will be sent to the Kern Canyon. This will provide multiple efforts during each growing season that will ensure that the area will be monitored on a recurring annual basis, and any remaining plants are removed. These continuing efforts will ensure that large-scale restoration will not be necessary in the future.

Both management plans are public documents and can be found at:
http://www.nps.gov/seki/parkmgmt/management-plans.htm
http://www.invasivespeciesinfo.gov/laws/execorder.shtml

Management Directive 38 for Sequoia and Kings Canyon National Parks is included with the application packet.

National Park Service
U.S. Department of the Interior

Sequoia and Kings Canyon National Parks

Management Directive No. 038
Preventing Introduction and Spread of Invasive Non-Native Plants
August 18, 2004

CONTENTS

PURPOSE

This policy establishes guidelines to prevent the introduction and spread of non-native plant species within Sequoia and Kings Canyon National Parks and Devils Postpile National Monument. It covers all activities performed by government employees, park concessioners, permittees, contractors, and partners.

NPS policies on preventing the introduction and spread of non-native plants include the following:

- Non-native species will not be allowed to displace native species if displacement can be prevented (NPS Management Policies 2001, 4.4.4).
- New non-native species will not be introduced into parks, except in specific rare situations (NPS Management Policies 2001, 4.4.4.1).
- Livestock will be fed pelletized feed or hay that is free of weed seeds (NPS Management Policies 2001, 8.6.8.2).
- Activities may not be categorically excluded from NEPA if they contribute to the introduction, continued existence, or spread of federally listed noxious weeds (DO-12 Handbook 3.5N, Federal Noxious Weed Control Act).
- Activities may not be categorically excluded from NEPA if they contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth, or expansion of the range of non-native invasive species (DO-12 Handbook 3.5O, Executive Order 13112).

By far the most efficient and cost-effective way to keep invasive non-native plants from displacing native species is to (1) prevent the entry of non-native plants into the parks, and (2) prevent the spread of existing non-native plant populations within the parks. Once new populations of non-native plants establish they may multiply rapidly. As a consequence, removal can be extremely difficult and costly. The

importance of a strong prevention program as a vital component in the management of invasive non-native plants cannot be overstated.

Seeds of non-native plants travel wherever and whenever soil is moved from one location to another. Seeds can lodge in the treads of car tires, bicycle tires, or shoe soles. Soil, sand, or gravel imported for construction or other activities can contain non-native plant seeds. Many non-natives, for example puncture vine (*Tribulus terrestris*), have spiny or hook-like seed coats and can arrive in the park stuck to the fur of pets, wildlife, and pack stock or on people's clothing, shoelaces, and camping gear. Plants installed around park residences for landscaping can spread to surrounding natural areas. Seeds can blow in from the gardens of neighboring private landowners or can wash downstream in rivers. Hay, used to feed livestock, or straw, used in revegetation projects, can contain non-native plant seeds from the field where the hay was grown.

This policy covers the following activities that have the highest probability of contributing to the introduction and spread of non-native plants:

- Landscaping and planting of vegetation, including maintenance of cultural landscapes
- Construction, restoration, and fire activities, including import of equipment, import of materials, and soil disturbance.
- Import of livestock and feed
- Movement of people and equipment from frontcountry sites, such as heliports, pack stations, and trailheads, into pristine backcountry sites.

NEED FOR POLICY

Invasive non-native plants can spread across landscapes and quickly become difficult or impossible to control. Invasive plants can out-compete native vegetation, diminishing native plant diversity and endangering rare plant and animal species. Invasive plants can reduce wildlife habitat and forage and cause illness, injury, and sometimes death in wildlife and livestock. Areas invaded by non-native plants frequently have greater rates of soil erosion and stream sedimentation because invasive plant monocultures tend to be poorer at holding topsoil in place than native plant communities. Invasive plants can alter soil nutrient and moisture levels; these changed growing conditions may displace natives and favor further non-native plant invasions. Invasive plants can increase fire frequency and change the burning season. These altered fire regimes may favor further non-native plant invasion. Invasive plants can cause the deterioration and loss of wetland meadows. Finally, many invasive plants are spiny and can turn a formerly pleasant recreational experience into a painful encounter for visitors.

An example of a non-native species that has greatly diminished the quality of natural ecosystems is yellow star thistle (*Centaurea solstitialis*). Yellow star thistle has already formed monocultures over millions of acres of public land in the West, reducing the value of the land as natural preserves and for recreation and wildlife. Yellow star thistle has not yet established in these parks, although it is approaching park boundaries.

One of the primary purposes of Sequoia and Kings Canyon National Parks and Devils Postpile National Monument is to protect, restore and maintain the parks' diverse natural resources against external threats to those resources. The parks are committed to preserving our diverse native flora against the threat of invasive plants by using Integrated Pest Management (IPM). Integrated Pest Management is a method of combining tools (physical/mechanical, chemical, cultural/fire, and biological) for controlling existing infestations Integrated Pest Management systems also place a strong emphasis on preventing import and spread of new non-native plants, early detection and control of small new infestations, and restoring rapid

vegetative cover in recent disturbances. Division of Natural Resources crews actively control existing infestations. Prevention of new invasions requires the cooperative efforts of residents and park staff in all divisions, as well as concessioners, visitors, owners of private inholdings, permittees, and neighboring communities. Preventing the import and spread of invasive plants is the most efficient and cost-effective way to protect park resources against the threat of invasive plants.

The biodiversity of these parks has three components: ecosystem, species, and genetic diversity; all must be protected according to NPS Management Policies. Genetic diversity refers to the variation of genes within species. This covers genetic variation between distinct populations of the same species. The genetic variation of a local plant population is often significantly different from that of a population of the same species in a coastal environment, for example. National parks are among the few places in this country that have not, to a large extent, been subject to the introduction of non-local genetic stock; that is, the plants here are evolving in place. As a consequence, national parks that remain relatively "unsullied" by anthropogenic alterations and perturbations are invaluable to evolutionary biologists studying natural selection against a background of natural processes. The introduction of non-local genetic strains of local native species, and their subsequent hybridization with local stock, would confound this "native genetic trace" for future investigators. Therefore, a conservative approach of preserving these parks' local genes in as pristine a state as possible is warranted.

LANDSCAPING AND CULTURAL LANDSCAPES

Non-native plants cultivated in gardens and around houses (known as "cultivars") can be significant contributors to wildland invasions. Many of them escape from planting areas into adjacent riparian and natural areas. The problem is most apparent in Ash Mountain, where greater periwinkle (*Vinca major*), giant reed (*Arundo donax*), and Spanish broom (*Spartium junceum*) have escaped from around residences into surrounding riparian habitats. Non-native cultivars are also a problem in Wilsonia and Mineral King, where private landowners and permittees have planted foxglove (*Digitalis purpurea*). Foxglove has spread widely onto park lands from Wilsonia.

NPS Management Policies (2001) does allow restricted use of non-native plants; most notably in altered plant communities, such as cultural landscapes, and to meet specific management needs in exceptional circumstances. The following excerpts from the NPS Management Policies provide direction on this issue:

4.4.2.5 Maintenance of Altered Plant Communities
In altered plant communities managed for a specific purpose, plantings will consist of species that are native to the park or that are historically appropriate for the period or event commemorated. Use of non-natural plantings in altered communities may be permitted under any of the following conditions:

- In localized, specific areas, screen plantings may be used to protect against the undesirable impacts of adjacent land uses, provided that the plantings do not result in the invasion of exotic species.
- Where necessary to preserve and protect the desired condition of specific cultural resources and landscapes, plants and plant communities generally will be managed to reflect the character of the landscape that prevailed during the historic period.
- Where needed for intensive development areas. Such plantings will use native or historic species and materials to the maximum extent possible. Certain native species may be fostered for esthetic, interpretive, or educational purposes.

Exotic species may not be used to vegetate vista clearings in otherwise-natural vegetation.

4.4.4.1 Introduction or Maintenance of Exotic Species

In general, new exotic species will not be introduced into parks. In rare situations, an exotic species may be introduced or maintained to meet specific, identified management needs when all feasible and prudent measures to minimize the risk of harm have been taken, and it is:

- Used to control another, already-established exotic species; or
- Needed to meet the desired condition of a historic resource, but only where it is prevented from being invasive by such means as cultivating (for plants). . . In such cases, the exotic species used must be known to be historically significant, to have existed in the park during the park's period of historical significance, or to have been commonly used in the local area at that time; or
- Necessary to provide for intensive visitor use in developed areas, and both of the following conditions exist:
  - Available native species will not meet park management objectives; and
  - The exotic species is managed so it will not spread or become a pest on park or adjacent lands; or
- A sterile, non-invasive plant that is used temporarily for erosion control

Guidelines for SEKI Landscaping

The following principles will be followed when planting new landscaping within the park:

1. All new landscaping of administrative and concession facilities (lodging, other buildings, parking lots, roadsides, spray fields, etc.) will be done with species native to the immediate area and grown from local genetic stock. Exceptions may be made in the foothills, where non-native annual grasses are widely naturalized. In these locations, non-invasive species that are common and widespread in the surrounding area may be used temporarily for erosion control or to match surrounding vegetation, with the review and approval of the Chief of Natural Resources. For example, a trench through turf grass may be replanted with turf grass. Revegetation will promptly follow construction of new facilities.

2. For permanent, in-ground plantings around their homes, residents must use species native to the immediate area and grown from local genetic stock. Contact Vegetation Management or the Ash Mountain Native Plant Nursery (559-565-3775) for availability of appropriate planting material, and for further planting information and alternatives.

3. Residents may grow non-native plants that are not on the prohibited plant list (see last page of this directive). The plants must be contained in above-ground containers, or in small planters completely surrounded by walls or pavement (such as the narrow area between a walkway and a house). Residents must remove these non-native plants when they vacate park housing. Residents are encouraged to protect fruits and vegetables from consumption by wildlife, and to remove fruit or seed-bearing flower heads before the seeds ripen and disperse.

4. Use of non-native plants that threaten surrounding natural areas is prohibited. The list of prohibited plants is at the end of this directive. This list, which focuses on horticultural plants available at nurseries, includes species that are:

   - federally-listed noxious weeds,
   - state-listed noxious weeds,
   - invasive plants listed by the California Invasive Plant Council,
   - invasive plants listed as priorities 1, 2, or 3 in SEKI by the USGS-BRD,
   - or invasive plants listed by the Pacific Northwest Exotic Pest Plant Council.

5. Use of species native to the surrounding area but not of local genetic stock is prohibited. For example, a California buckeye tree purchased from a valley or coastal commercial native plant nursery may not be planted at a park residence. Use of local genetic stock preserves the parks' unique genetic resources. In addition, local populations have a genetic memory of historical environmental variability and usually grow better in the local environment than plants of a non-local origin.

6. Species native to other areas of California but NOT native to the immediate area may be used unless they have naturally-occurring close relatives with which they may interbreed, such as *Arctostaphylos* spp. (manzanita), *Ceanothus* spp. (California lilac), *Epilobium* spp. (California fuchsia), *Eriogonum* spp.(buckwheat), *Mimulus* spp. (monkeyflower), *Quercus* spp. (oak), and *Ribes* spp (currant or gooseberry). Plants must be contained in above-ground containers, or in small planters completely surrounded by walls or pavement (such as the narrow area between a walkway and a house). Residents must remove these plants when they vacate park housing.

7. Herbicide-resistant cultivars may not be used anywhere.

8. Residents are encouraged to use native grasses and wildflowers, grown from local genetic stock, in lawns. There are native grasses and forbs that can form either a mowed or a natural lawn; contact Vegetation Management for more information.

9. Cabin permittees in Mineral King will be sent letters asking them to voluntarily comply with this policy. For locations with significant, known invasive plant problems, park staff may follow up with personal contacts. If these steps don't achieve the desired results, permits may be amended to prohibit use of invasive non-native plants and allow the NPS to remove established plants.

10. SEKI will engage and educate private land owners in Wilsonia, Silver City, and Oriole Lake. They will be informed of the threat to the park posed by non-native plant species. We will seek their voluntary cooperation in using native plant landscaping and removing non-native plants from their property.

The following principles will be followed for existing landscaping within the park:

1. Highly invasive non-native species will be removed when feasible. Residents will be notified before crews remove plants. Vegetation Management will work with residents to replace removed plants with natives of local genetic stock, if the latter plants are available.

2. Non-native species that are likely threats based on problems elsewhere in California will be removed on a case-by-case basis. These are species given a listing other than "USGS 1" or "CDFA" on the prohibited species list.

3. Residents are encouraged to keep non-native lawns mowed or closely clipped to prevent seed ripening and dispersal.

4. Residents are encouraged to voluntarily replace their non-native landscaping with species native to the immediate area and grown from local genetic stock. Contact Vegetation Management or the Ash Mountain Native Plant Nursery for availability of appropriate planting material, and for further planting information and alternatives.

The following principles will be followed for maintaining cultural landscapes within the park. The park Archeologist will be consulted and NPS management policies (2001) found at 4.4.2.1 and 5.3.5.2 will be followed as applicable:

1. The park Archeologist will be consulted on removal of invasive non-native plants relative to known or potential cultural landscapes, including historic sites. The park Archeologist or other Cultural Resource Management Specialist will determine if individual plant specimens have cultural resource significance, as part of the original intent and fabric of the site. Some examples of cultural landscapes that contain non-native plantings include Traugers Creek, Grunnigans Ranch, Ash Mountain, Potwisha, and Crystal Cave.

2. Highly invasive non-native species shall not be maintained as part of a cultural landscape, even if their presence predates the implementation of this policy. Where they already exist, they will be removed or treated. These species spread quickly and cause ecological damage. Experience has shown that it is not practical to maintain them in cultural settings because of the potential likelihood of escaping into adjacent natural habitats. Examples of such species are Himalayan blackberry, periwinkle, perennial sweet pea, Spanish broom, and giant reed.

3. Non-native species that are likely threats based on problems elsewhere in California may be retained where they are components of a documented significant cultural site. These are species given a listing other than "USGS 1" or "CDFA" on the prohibited species list. The Chief of Natural Resources and the Chief of Interpretation (or their designated representative) will agree on historic specimens to be retained and escaped progeny that may be removed. Examples of such species are olive, peach, pomegranate, and persimmon.

CONSTRUCTION, RESTORATION, AND FIRE ACTIVITIES

The intense soil disturbance inherent in construction, coupled with the import of equipment and materials that may harbor non-native plant seeds, make construction sites high-risk areas for invasion of non-native plants. Invasive non-native plants spread rapidly and aggressively from disturbed construction sites into adjacent natural communities. Once non-native plants become established, they can be very difficult and costly to eliminate. For example, until recently, Yosemite National Park was free of the highly invasive yellow star thistle (*Centaurea solstitialis*) until it was imported in contaminated soil on a Federal Lands Highway Project. It subsequently spread rapidly onto surrounding steep slopes, where control is extremely difficult and expensive.

Restoration sites, areas that have sustained high-intensity fire, fire line, and fuel breaks are also vulnerable to import and spread of non-native plants. Soils are disturbed to restore natural topography or to build fire line. Mechanized equipment, which can harbor non-native plant seeds, is often brought into the park. Materials that are imported to help mitigate soil erosion, such as straw and blanket, can contain non-native plant seeds.

The following principles will be followed in construction, restoration, and fire activities:

1. Before any equipment is brought into the park, it will be pressure or steam washed in order to remove seed-containing soil. Examples of equipment are backhoes, tractors, loaders, excavators, dozers, bobcats, wheeled compressors, or trucks and trailers that have traveled off-road. This restriction shall not apply to equipment responding to initial attack of wildland fire where fire spread is threatening life or property.

2. Staff is encouraged to wash equipment that has been off-road before moving it from place to place within the park, particularly when moving from lower to higher elevations.

3. Topsoil shall not be imported into the park.

4. Construction and restoration materials will be free of invasive weed seeds or other propagative plant parts. Such materials include boulders, soil, sand, gravel, rock, road base, straw, and silt and erosion control materials. Weed-free status may be ensured by pressure washing, steam washing, fumigation, heat sterilization, or certification from the supplier. Eliminating invasive plant seeds may raise the cost of some projects, but will prevent much more costly and prolonged invasive plant control efforts in the future.

5. Large quantities of construction and restoration materials may be prohibitively expensive to sterilize. The risk of importing invasive plants in bulk materials will be minimized by inspecting proposed quarries or source sites for presence of invasive plants. If no local weed-free sources can be located, potentially contaminated materials may be accepted if mitigation is implemented. Mitigation might include stripping the top 12 inches of material or requiring fresh material stored less than one month, as specified by Vegetation Management staff.

   For example, Yellowstone National Park uses a ranking system that considers the potential threat posed by the non-native species present in the quarry, the number of non-native plants present, the location of the plants (near crushing-loading sites vs. on the periphery), and whether the quarry has a weed management plan.

   For construction projects, the project manager and/or COR will be responsible for contacting Vegetation Management staff to inspect sources. For materials procured by the park for use by park staff, the park Contracting Officer will be responsible for contacting Vegetation Management staff to inspect sources.

6. Minimize the area of soil disturbance. Use hand line rather than dozer line where possible. Consider realigning trails or reducing the trail width to minimize disturbance. When removing invasive plants, consider using herbicides rather than digging out roots. Scrape road shoulders only where steep, material-shedding slopes make this action necessary.

7. Consider the location of soil disturbance. On fires, resource advisors and incident staff should consult park Vegetation Management staff when locating hand line and dozer line in areas known to have populations of invasive species. Dozer line and hand line should be located well away from invasive species whenever possible. To avoid patches of invasive species when aligning new trails, planners should consult Vegetation Management staff.

8. Minimize the frequency of soil disturbance. For example, disturbing an area once every five years creates less risk than disturbing it every year. If a site has to be cleared of vegetation yearly, consider paving it.

9. After completing construction, or when rehabilitating fire line, revegetate the area or cover bare soil with local litter and duff mulch as soon as possible. This mulch will provide a source of seeds to reestablish native vegetation and reduce the risk of non-native seeds germinating. Ideally, the litter and duff should be collected from surrounding areas, but do not denude the collection area. Leave at least 50 percent of the material in place and don’t disturb vegetation.

10. On fires, Vegetation Management specialists should be assigned as resource advisors to the incident management team whenever the spread of invasive species is probable. Vegetation Management specialists should be consulted in the development of fire line and burned area rehabilitation plans.

11. If funding or staff is available, survey and remove invasive plants from future burn units and construction sites at least one year before a planned ignition or the start of construction. One year's pre-construction survey should be funded by construction projects whenever possible. Contact Vegetation Management staff to conduct surveys.

12. After fire or construction, and until sites are fully revegetated, schedule annual surveys by qualified botanical technicians for early detection of invasive plants to prevent them from becoming problems. One year's follow-up survey should be funded by construction projects whenever possible.

13. Consider the risk of non-native plant invasion when locating perpetually disturbed facilities, such as campgrounds and corrals. For example, campsites adjacent to meadows create a high risk for non-native plants to become established at the campsite and enter the meadow. Consider closure of such high-risk campsites.

IMPORT OF LIVESTOCK AND FEED

Hay, raw feeds, and straw may contain invasive plant seeds if grown in fields where invasive plants flourish and reproduce. Invasive plants can be spread into previously unoccupied areas during transport of feed materials and by laying out hay at pack stations or trail heads. Verifying that animal feed and mulch is California certified weed free before it is used in an area can help prevent the spread of invasive plants. Use of straw as mulch is covered in the preceding section.

The following principles will be followed when importing livestock and feed into the park:

1. In accordance with California Food and Agriculture Code Section 5101 and 5202 for the certification of Weed Free Forage, Hay, Straw, and Mulch, these parks require that any hay or straw brought into the parks be certified weed free. This rule also applies to non-stock uses of straw. This rule will be included in pack station concessions contracts and commercial use authorizations. Public stock users will be informed of this rule when they obtain their wilderness permit.

2. Stock users are encouraged to purge their animals for several days on CA certified weed free feed prior to entering the park.

3. Stock entering the parks, or moving from place to place within the park, will be inspected and cleaned to detect and remove any plant parts, seeds, or soil that may have adhered to animals (or tack and equipment). This rule will be included in pack station concessions contracts and commercial use authorizations. Public stock users will be informed of this rule when they obtain their wilderness permit.

4. Manure that accumulates in corrals will be removed from the park and not stockpiled within the park. This rule will be included in pack station concessions contracts.

5. NPS and commercial pack stations will be kept free of invasive plants within a 20-foot buffer of the facility. This will be the responsibility of the pack stations. Vegetation Management staff is available to consult.

FRONTCOUNTRY TO BACKCOUNTRY TRAVEL

These parks are fortunate. Backcountry wilderness areas in SEKI are largely free of invasive non-native plants. Even those species, such as cheatgrass (*Bromus tectorum*) and bull thistle (*Cirsium vulgare*), that have managed to colonize backcountry sites have left many drainages untouched. Protection of the parks' wilderness vegetation from invasion by non-native plants is of the highest priority.

The following guidelines will be followed to protect wilderness vegetation:

1. Park field crews and cooperating researchers working in sites where seeds could get stuck in boot and shoelaces should wear gaiters. In general, they should use all practicable precautions to prevent movement of seeds from the work site to other park sites.

2. Heliports are focal points for the movement of non-native plant seeds from the frontcountry to the backcountry. Heliports will be kept free of invasive plants within a 20-foot buffer of the facility. This will be the responsibility of heliport staff. Vegetation Management staff is available to consult.

3. Major trailheads will be inspected for invasive plants and kept weed-free. Vegetation Management staff will work with trailhead rangers to inspect for and remove invasive plants.

4. Backcountry users will be taught to inspect backpacking equipment and boots for soil, seeds, and plant parts, and asked to certify that all equipment and clothing is free of such material. This should be a condition for receipt of a wilderness permit.

5. Backcountry and trailhead rangers will be trained in invasive plant identification and will be key personnel in early detection of new invasions.

6. All park personnel will be informed and involved in invasive plant identification, early detection, and reporting. Park newsletters, pamphlets, reference books in park libraries, SEKI herbaria, and invasive plant observation cards are available for this purpose. Call 559-565-4479 for more details.

7. Park visitors will be informed of the threat of non-native plant species and how they can help prevent non-native plants from entering the parks.

ROLES AND RESPONSIBILITIES

Some of these policies may take some lead time to implement. For example, commercial pack stations with incidental business permits will need sufficient time to locate suppliers of certified weed-free feed and find the lowest prices. A quarry inspection system may take several years to finalize and implement. Divisions will have to work cooperatively to accomplish the policy with the least disruption to operations.

The SEKI Superintendent issues policy and makes final decisions. He or she communicates the importance of policy to all employees. The superintendent will also communicate with owners of private inholdings and permittees asking for voluntary cooperation with this policy.

The Chief of Fire and Visitor Management (Chief Ranger) ensures that heliports maintain a weed-free buffer, that equipment to build fire line is washed before entering the park, and that fire line is rehabilitated as soon as possible. He or she encourages active participation of backcountry and trailhead rangers in detecting and reporting non-native plant invasions. The Chief Ranger incorporates this policy into wilderness permits and information.

The Chief of Interpretation incorporates non-native plants (threat and prevention) into interpretive message to visitors as feasible. He or she ensures that cultural landscape issues are properly considered and that the park Archeologist is sufficiently involved in the implementation of the Management Directive.

The Chief of Maintenance incorporates weed-free and equipment washing specifications into contracts managed by Denver Service Center and Federal Lands Highway Administration. He or she ensures that equipment used for park operations is washed before re-entering the park or moving from place to place within the park. The Chief of Maintenance implements policy for import of livestock and feed for government stock and ensures that government pack stations maintain a weed-free buffer. He or she implements policy for soil disturbance in work by road and trail crews and ensures that all new construction includes a revegetation and non-native plant inspection component.

The Chief of Natural Resources proposes policy updates and implements policy for soil disturbance in work conducted by revegetation and non-native plant crews. He or she ensures that DNR field crews prevent movement of non-native plant seed from place to place in their boots and equipment.

The Contracting Officer incorporates weed-free standards into procurement of sand, gravel, road base, and other construction and restoration materials. He or she, along with the Chief of Maintenance ensures that contracts issued by the parks include weed-free and equipment-washing specifications.

The Budget Officer incorporates landscaping policy into housing agreements and housing policy.

The Concessions Manager incorporates these policies into concessions contracts and incidental business permits, in particular, those contracts with commercial pack stations. He or she serves as primary contact/liaison in communicating policy to permittees and owners of private inholdings, and amending permits if necessary.

The Superintendent of Devils Postpile National Monument ensures that all DEPO activities and employees implement this policy.

The Senior Science Advisor and his or her staff ensure that this policy is necessary and sufficient based on the best available scientific knowledge.

The Ecologist (Ecological Restoration and Invasive Plant Management) serves as primary point-of-contact in administering policy. He or she consults with all divisions in surveying sites for invasive plants, writing contract specifications, developing a quarry inspection system, and incorporating policy into special use permits, incidental business permits, and concessions contracts. The Ecologist works with Concessions office and superintendent in issuing letters to cabin permittees and owners of private inholdings. Implements policy for soil disturbance in work by revegetation and non-native plant crews.

_____ _____

Richard H. Martin Date
Superintendent

APPENDIX A: DEFINITIONS

Alien species: (see non-native species).

Control: as appropriate, eradicating, suppressing, reducing, or managing invasive species populations, preventing spread of invasive species from areas where they are present, and taking steps such as restoration of native species and habitats to reduce the effects of invasive species and to prevent further invasions (Executive Order 13112).

Ecosystem: the complex of a community of organisms and its environment (Executive Order 13112).

Exotic species: (see non-native species).

Highly invasive non-native species: for the purpose of this directive, these are species given a USGS C1 or CDFA rating in the prohibited plant list at the end of this document.

Introduction: the intentional or unintentional escape, release, dissemination, or placement of a species into an ecosystem as a result of human activity (Executive Order 13112).

Invasive species: a non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive species display rapid growth and spread, establish over large areas, and persist (Executive Order 13112).

Local genetic stock: for the purpose of this directive, plants of local genetic stock are those grown from seed or cuttings collected from the same drainage/sub-watershed and within a similar elevational range (500 feet) of where they will later be planted.

Native species: with respect to a particular ecosystem, a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem (Executive Order 13112).

Non-native species: with respect to a particular ecosystem, any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem (Executive Order 13112).

Noxious weed: a weed specified by law as being especially undesirable, troublesome, and difficult to control. In California, a noxious weed is legally defined as "any species of plant which is, or is liable to be, detrimental or destructive and difficult to control or eradicate, which the director, by regulation, designates to be a noxious weed" (California Food and Agriculture Code).

Species: a group of organisms all of which have a high degree of physical and genetic similarity, generally interbreed only among themselves, and show persistent differences from members of allied groups of organisms (Executive Order 13112).

Weed: a plant growing where it is not desired (Weed Science Society of America). For the purposes of this directive, a weed is a non-native species that interferes with management objectives for a particular site. In this document, "weed" is synonymous with "invasive species."

Wilderness: in contrast with those areas where man and his own works dominate the landscape, an area where the earth and its community of life are untrammeled by man and where man himself is a visitor who does not remain. Wilderness retains its primeval character and influence and is protected and

managed in such a way that it appears to have been affected primarily by the force of nature (Wilderness Act).

APPENDIX B: PROHIBITED PLANT LIST

The plants listed below are prohibited in Sequoia and Kings Canyon National Parks. They are easily available through the horticultural industry and pose an extreme risk for escape into natural areas of SEKI and DEPO. The list, based on research and recommendations, has been compiled from the following sources: California Invasive Plant Council (Cal-IPC), United States Geological Survey-Biological Resources Division (USGS), California Department of Food and Agriculture (CDFA), United States Department of Agriculture (USDA), and the Pacific Northwest Exotic Pest Plant Council (PNW-EPPC). A USDA listing is a nationally designated threat, a CalIPC or CDFA listing is a serious statewide risk, and a USGS designation is a specific threat to Sequoia & Kings Canyon National Parks. The Pacific Northwest Exotic Pest Plant Council (PNW-EPPC), addresses non-native plant concerns of the states of Washington and Oregon, both of which contain climates and vegetation types similar to Sequoia and Kings Canyon National Parks. This list will be updated periodically.

Plants listed under a starred column heading (CDFA and USGS "C1" only) are known to be highly invasive, and established plantings will be removed as soon as is feasible. Residents will be notified before plants are removed.

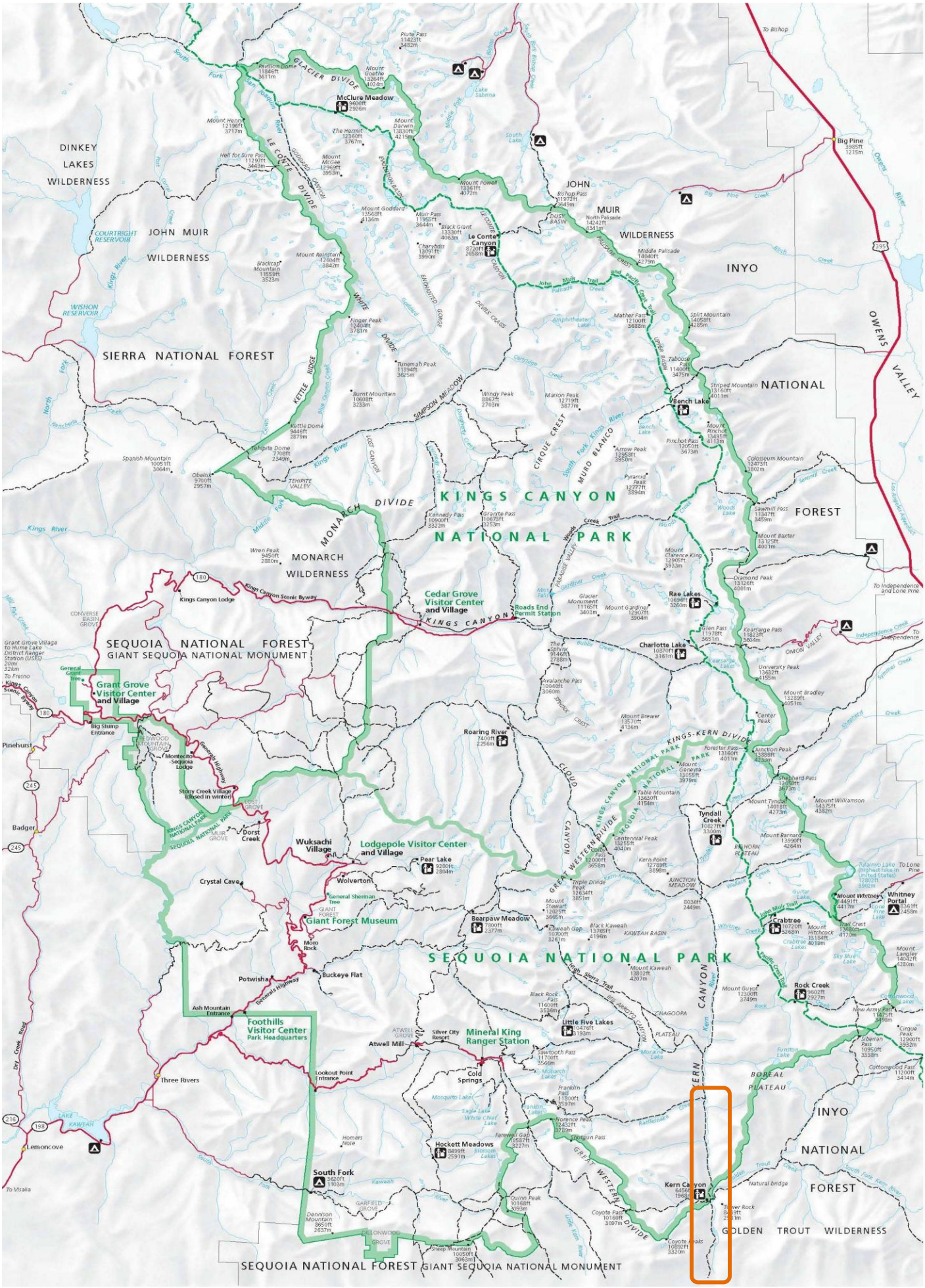
Scientific name	Common Name	Currently in Park	USGS*	USDA	CDFA*	Cal-IPC	PNW-EPPC
Annuals:							
Arctotheca calendula	Capeweed			USDA	CDFA	Cal-IPC	
Calendula officinalis	Calendula						
Centaurea cyaneus	Cornflower, Bachelor Buttons						
Cosmos bipinnatus	Cosmos						
Dimorphotheca sinuata	African Daisy					Cal-IPC	
Linaria maroccana	Toadflax						
Linum grandiflorum rubrum	Scarlet Flax						
Egeria densa	Aquarium Elodea						PNW-EPPC
Bulbs:							
Crocosmia x crocosmiiflora	Crocosmia					Cal-IPC	
Iris sp.	Iris	X	USGS C2	USDA	CDFA		
Leucojum aestivum	Summer Snowflake	X	USGS C2				
Herbaceous Perennials							
Althaea rosea	Hollyhocks						
Aptenia cordifolia	Red Apple Iceplant					Cal-IPC	
Carpobrotus chilensis	Sea Fig					Cal-IPC	
Carpobrotus edulis	Hottentot Fig					Cal-IPC	
Centranthus ruber	Valerian					Cal-IPC	
Coreopsis lanceolata	Coreopsis	X	USGS C1				
Daucus carota	Queen Anne's Lace						PNW-EPPC
Digitalis purpurea	Foxglove	X	USGS C1			Cal-IPC	PNW-EPPC
Euphorbia lathyris	Gopher Spurge					Cal-IPC	
Foeniculum vulgare	Fennel	X	USGS C1			Cal-IPC	PNW-EPPC
Gazania linearis	Gazania					Cal-IPC	
Gypsophila paniculata	Baby's Breath			USDA	CDFA		
Helichrysum petiolare	Licorice Plant					Cal-IPC	
Hypericum perforatum	Creeping St. Johnswort	X	USGS C1	USDA		Cal-IPC	PNW-EPPC
Iris sp.	Iris	X	USGS C2	USDA	CDFA		
Lathyrus latifolius	Perennial Sweet Pea	X	USGS C1				

Scientific name	Common Name	Currently in Park	USGS*	USDA	CDFA*	Cal-IPC	PNW-EPPC
Leucanthemum maximum	Shasta Daisy		USGS C1				
Leucanthemum vulgare	Ox-eye Daisy		USGS C1				PNW-EPPC
Limonium ramosissimum ssp provinciale	Sea Lavender					Cal-IPC	
Linaria genistifolia ssp. dalmatica	Dalmation toadflax				CDFA		
Lythrum salicaria	Purple Loosestrife			USDA	CDFA	Cal-IPC	
Mentha pulegium	Pennyroyal	X	USGS C1				
Mentha spicata	Spearmint	X	USGS C1				
Mesembryanthemum crystallinum	Crystalline Iceplant					Cal-IPC	
Mesembryanthemum nodiflorum	Slender-leaved Iceplant					Cal-IPC	
Oxalis pes-caprae	Bermuda Buttercup	X	USGS C1			Cal-IPC	
Polygonum cuspidatum	Japanese Knotweed			USDA			PNW-EPPC
Rudbeckia hirta	Black-eyed Susan		USGS C1				
Salvia aethiopia	Mediterranean Sage				CDFA	Cal-IPC	PNW-EPPC
Tanacetum vulgare	Common Tansy					Cal-IPC	PNW-EPPC
Tropaeolum majus	Nasturtium						
Verbascum thapsus	Woolly Mullein	X	USGS C3			Cal-IPC	PNW-EPPC
Verbena bonariensis	Vervain					Cal-IPC	
Zantedeschia aethiopica	Calla Lily					Cal-IPC	
Perennial Grasses:							
Arundo donax	Giant Reed	X	USGS C1	USDA	CDFA	Cal-IPC	
Cortaderia jubata	Pampas Grass			USDA	CDFA	Cal-IPC	
Cortaderia selloana	Pampas Grass					Cal-IPC	
Cynodon dactylon	Bermudagrass	X		USDA	CDFA		
Festuca arundinacea	Tall Fescue	X	USGS C1			Cal-IPC	
Lolium spp.	Ryegrass	X	USGS C2	USDA			
Miscanthus floridulus	Miscanthus			USDA			
Pennisetum setaceaum & cultivars	Fountain Grass			USDA		Cal-IPC	
Phalaris arundinacea	Reed Canary Grass	X	USGS C1				PNW-EPPC
Phyllostachys aurea	Golden Bamboo	X					
Poa pratensis	Kentucky Bluegrass	X	USGS C3	USDA			
Zoysia cultivars	Zoysia Grass					Cal-IPC	
Vines:							
Ampelopsis arborea	Peppervine	X	USGS C1				
Hedera canariensis	Algerian Ivy					Cal-IPC	
Hedera helix	English Ivy	X	USGS C1			Cal-IPC	PNW-EPPC
Lonicera japonica	Japanese Honeysuckle			USDA			
Passiflora caerulea	Passion Vine					Cal-IPC	
Senecio mikanioides	Cape Ivy			USDA	CDFA		
Vinca major	Periwinkle	X	USGS C1			Cal-IPC	PNW-EPPC
Vitis vinifera	Cultivated Grape		USGS C1				
Shrubs:							
Atriplex semibaccata	Australian Saltbush					Cal-IPC	
Cistus sp.	Rock-rose	X	USGS C1			Cal-IPC	
Coprosma repens	Mirror Plant	X				Cal-IPC	
Cotoneaster all sp.	Cotoneaster	X				Cal-IPC	
Cytisus scoparius	Broom	X		USDA	CDFA	Cal-IPC	PNW-EPPC
Echium sp.	Pride of Madeira					Cal-IPC	PNW-EPPC

Scientific name	Common Name	Currently in Park	USGS*	USDA	CDFA*	Cal-IPC	PNW-EPPC
Genista monspessulana	French Broom	X	USGS C1		CDFA	Cal-IPC	
Heteromeles arbutifolia	Toyon	X	USGS C1				
Ilex aquifolium	English Holly					Cal-IPC	
Ligustrum lucidum	Glossy Privet					Cal-IPC	
Ligustrum sinense	Chinese Privet	X	USGS C1	USDA			
Myoporum laetum	Myoporum	X				Cal-IPC	
Nandina domestica	Heavenly Bamboo	X					
Nerium oleander	Oleander	X	USGS C1			Cal-IPC	
Pitosporum undulatum	Victorian Box			USDA			
Pyracantha angustifolia	Pyracantha	X	USGS C1			Cal-IPC	
Ricinus communis	Castor Bean					Cal-IPC	
Rubus discolor	Himalayan Blackberry	X	USGS C1			Cal-IPC	PNW-EPPC
Rubus laciniatus	Cut-leaf Blackberry	X	USGS C1			Cal-IPC	PNW-EPPC
Spartium junceum	Spanish Broom	X	USGS C1	USDA	CDFA	Cal-IPC	
Trees:							
Acacia dealbata	Silver Wattle					Cal-IPC	
Acacia decurrens	Green Wattle					Cal-IPC	
Acacia melanoxylon	Blackwood Acacia					Cal-IPC	
Ailanthus altissima	Tree of Heaven			USDA	CDFA	Cal-IPC	PNW-EPPC
Albizia lophantha	Plume Acacia					Cal-IPC	
Carya sp.	Pecan	X	USGS C2				
Catalpa bigniodes	Catalpa	X	USGS C1				
Diospyros sp.	Persimmon	X	USGS C2				
Eleagnus angustifolia	Russian Olive			USDA		Cal-IPC	PNW-EPPC
Eucalyptus citriodora	Lemon-scented Gum	X	USGS C1				
Eucalyptus globulus	Blue Gum					Cal-IPC	
Ficus carica	Edible Fig	X	USGS C1			Cal-IPC	
Juglans californica	California Black Walnut	X	USGS C1				
Juglans regia	English Walnut	X	USGS C1				
Malus sylvestris	Apple	X	USGS C1				
Maytenus boaria	Mayten Tree					Cal-IPC	
Morus alba	White Mulberry	X	USGS C1				PNW-EPPC
Nicotiana glauca	Tree Tobacco					Cal-IPC	
Olea europa	Olive	X	USGS C2			Cal-IPC	
Pinus radiata	Monterey Pine					Cal-IPC	
Pistacia chinensis	Chinese Pistache					Cal-IPC	
Prunus cerasifera	Cherry Plum					Cal-IPC	
Prunus persica	Peach	X	USGS C2				
Punica granatum	Pomegranate	X	USGS C2				
Robinia pseudoacacia	Black Locust	X				Cal-IPC	PNW-EPPC
Sapium sebiferum	Chinese Tallow Tree			USDA		Cal-IPC	
Schinus molle	California Pepper Tree					Cal-IPC	
Schinus terebinthifolius	Brazilian Pepper Tree					Cal-IPC	
Tamarix all sp.	Salt Cedar	X	USGS C1	USDA	CDFA	Cal-IPC	PNW-EPPC
Tanacetum parthenium	Feverfew	X	USGS C1			Cal-IPC	
Non-Horticultural Species:							
Agrostis gigantean	Redtop	X	USGS C1				PNW-EPPC
Bromus tectorum	Cheatgrass	X	USGS C3			Cal-IPC	PNW-EPPC
Carduus pycnocephalus	Italian thistle	X	USGS C1		CDFA	Cal-IPC	

Scientific name	Common Name	Currently in Park	USGS*	USDA	CDFA*	Cal-IPC	PNW-EPPC
Centaurea solstitialis	Yellow star thistle		USGS C1		CDFA	Cal-IPC	PNW-EPPC
Cirsium vulgare	Bull thistle	X	USGS C3		CDGA	Cal-IPC	PNW-EPPC
Convolvulus arvensis	Bindweed	X	USGS C1		CDFA		PNW-EPPC
Dactylis glomerata	Orchard grass	X	USGS C1				PNW-EPPC
Descurainia sophia	Herb Sophia	X	USGS C1			Cal-IPC	PNW-EPPC
Echinochloa crus-galli	Barnyard grass	X	USGS C2				
Festuca pratensis	Meadow fescue	X	USGS C2				PNW-EPPC
Holcus lanatus	Common velvet grass	X	USGS C2			Cal-IPC	PNW-EPPC
Marrubium vulgare	Horehound	X	USGS C1				
Medicago sativa	Alfalfa	X	USGS C1				
Melilotus alba	White sweetclover	X	USGS C1				PNW-EPPC
Melilotus indica	Sourclover	X	USGS C1				
Melilotus officinalis	Yellow sweetclover	X	USGS C1				PNW-EPPC
Mentha pulegium	Pennyroyal	X	USGS C1			Cal-IPC	
Phalaris minor	Littleseed canarygrass	X	USGS C2				
Phalaris paradoxa	Hood canarygrass	X	USGS C2				
Phleum pretense	Cultivated timothy	X	USGS C2				PNW-EPPC
Piptatherum miliaceum	Smilo grass	X	USGS C2			Cal EPPC	
Poa bulbosa	Bulbous bluegrass	X	USGS C2				
Poa compressa	Canadian bluegrass	X	USGS C2				PNW-EPPC
Poa palustris	Fowl bluegrass	X	USGS C1				
Polypogon australis	Chilean rabbitsfoot grass	X	USGS C1				
Polypogon interruptus	Ditch beard grass	X	USGS C1				
Polypogon monspeliensis	Annual beard grass	X	USGS C2				
Ranunculus parviflorus	Smallflower buttercup	X	USGS C1				
Ranunculus testiculatus	Curveseed butterwort	X	USGS C1				
Silybum marianum	Milk thistle	X	USGS C1				PNW-EPPC
Sorghum halepense	Johnsongrass	X	USGS C2		CDFA		PNW-EPPC
Tanacetum parthenium	Feverfew		USGS C1				
Tragopogon dubius	Yellow salsify	X	USGS C1				
Trifolium repens	White clover	X	USGS C1				
Urtica urens	Dwarf nettle	X	USGS C1				
Verbascum virgatum	Wand mullein	X	USGS C1				
Vicia benghalensis	Purple vetch	X	USGS C1				
Vicia sativa	Common vetch	X	USGS C1				
Vicia villosa	Winter vetch	X	USGS C1				PNW-EPPC
Vulpia bromoides	Brome fescue	X	USGS C2				

PROJECT LOCATION MAP (Outlined in Orange on the Map Below)



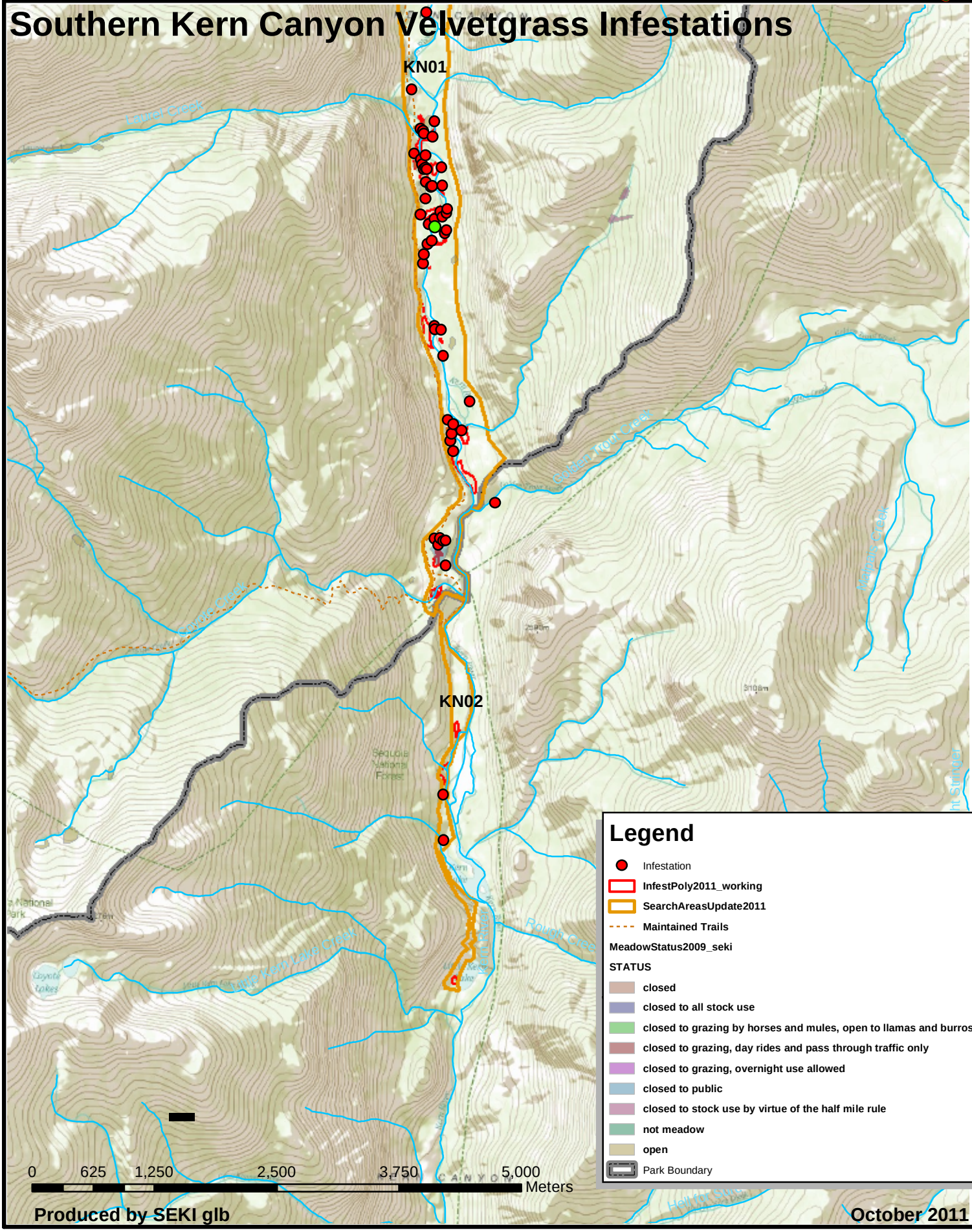
Parcel Map- N/A

1. Federal Land with no parcel number(s) or/
2. Multi parcel (community fire safe project)

Sequoia and Kings Canyon National Parks
California

National Park Service
U.S. Department of the Interior

Southern Kern Canyon Velvetgrass Infestations



Legend

- Infestation
- InfestPoly2011_working
- SearchAreasUpdate2011
- Maintained Trails

MeadowStatus2009_seki

STATUS

- closed
- closed to all stock use
- closed to grazing by horses and mules, open to llamas and burros
- closed to grazing, day rides and pass through traffic only
- closed to grazing, overnight use allowed
- closed to public
- closed to stock use by virtue of the half mile rule
- not meadow
- open
- Park Boundary

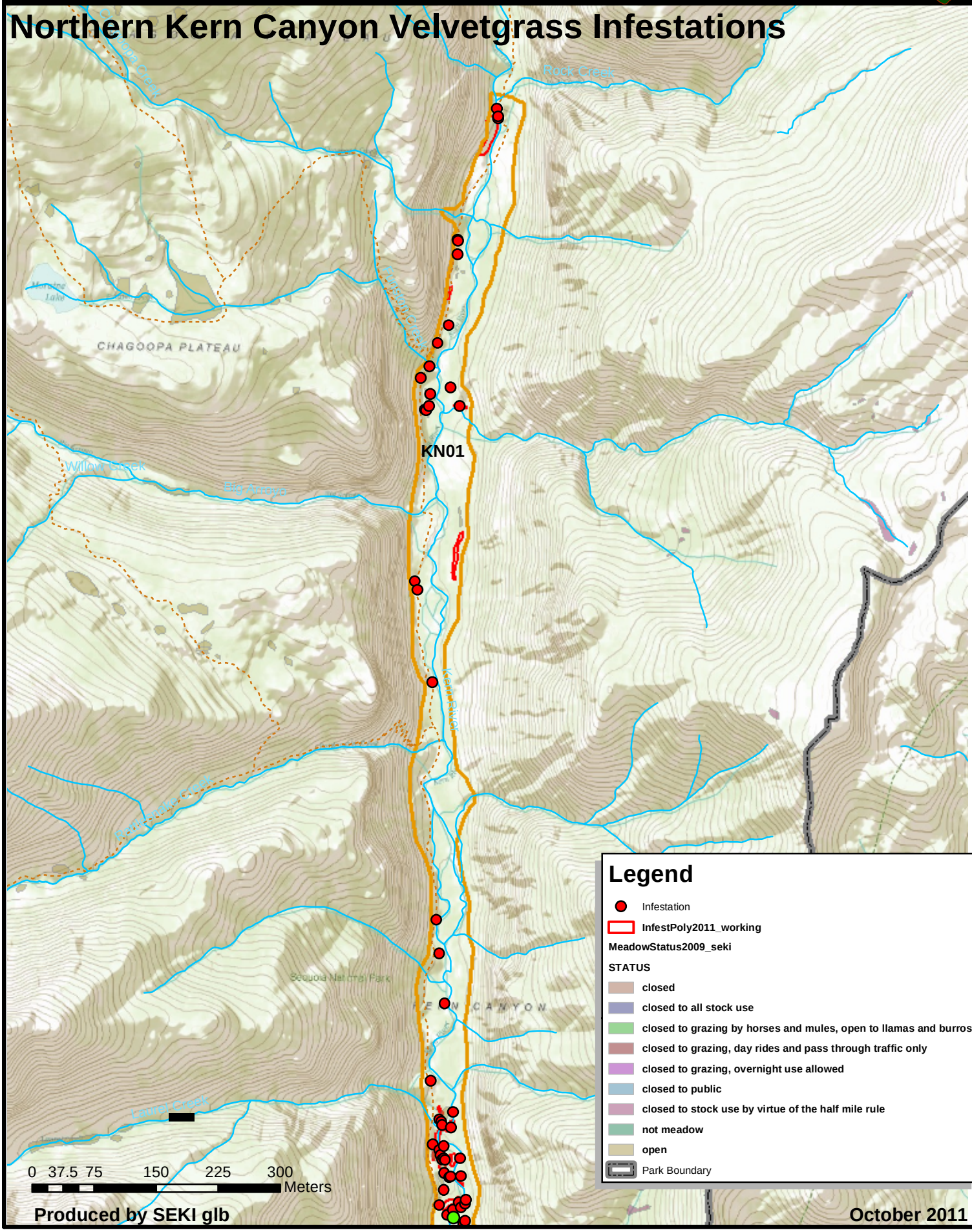
Produced by SEKI glb

October 2011

Sequoia and Kings Canyon National Parks
California

National Park Service
U.S. Department of the Interior

Northern Kern Canyon Velvetgrass Infestations



Legend

- Infestation
- InfestPoly2011_working

MeadowStatus2009_seki

STATUS

- closed
- closed to all stock use
- closed to grazing by horses and mules, open to llamas and burros
- closed to grazing, day rides and pass through traffic only
- closed to grazing, overnight use allowed
- closed to public
- closed to stock use by virtue of the half mile rule
- not meadow
- open
- Park Boundary

Produced by SEKI glb

October 2011

Key to Photos of the Project Site

Photo	Description
1	Native grasses and sedges growing in areas where velvetgrass has been controlled along the Kern River in Sequoia National Park.
2	American Conservation Experience crew members working in Lower Funston Meadow, Sequoia National Park.
3	Photo showing an area after removal of tarping material.
4	Kern Canyon meadow after removal of velvetgrass. Notice the disturbed ground in the middle of the photo.
5	American Conservation Experience crew members working in a heavily invaded velvetgrass site in Sequoia National Forest.
6	Dense stand of velvetgrass at Little Kern Lakes, Sequoia National Forest.

United States Department of Agriculture
Forest Service
Sequoia National Forest
Giant Sequoia National Monument
Western Divide District
32588 Highway 190
Springville, CA 93265
(559) 539-2607 / (559) 539-2067 (fax)
www.fs.fed.us/r5/sequoia/

File Code: 2320

Date: January 20, 2012

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

To whom it may concern:

Sequoia and Kings Canyon National Parks is submitting a grant proposal with the Sierra Nevada Conservancy that would implement actions to control velvet grass (a noxious weed) in the Kern Canyon, located in the Golden Trout Wilderness. The project area is within the Sequoia National Forest. The U.S. Forest Service authorized a similar project in 2011. This project would be a follow-up treatment of the same weed populations.

This letter documents that the U.S. Forest Service has tenure/ownership of the project area. Further, this letter authorizes personnel from Sequoia and Kings Canyon National Parks to implement the project, if awarded. The fiscal representative for the Sequoia National Forest is Vicki Yarbrough.

Sincerely,

Tricia Christofferson

TRICIA CHRISTOFFERSON
Acting District Ranger

United States Department of the Interior

NATIONAL PARK SERVICE
Sequoia and Kings Canyon National Parks
47050 Generals Highway
Three Rivers, California 93271-9651
(559) 565-3341

IN REPLY REFER TO:

N1617 (1.A.2)

January 17, 2012

Sierra Nevada Conservancy
11521 Blocker Drive, Suite 205
Auburn, CA 95603

To Whom It May Concern:

This is in reference to the following two grant applications from Sequoia and Kings Canyon National Parks:

1. Create a Restoration Plan for Cahoon Meadow, Sequoia National Park
2. Control of Velvet Grass in Kern Canyon, Sequoia National Park and Sequoia National Forest

The authorized fiscal representative for both grant applications is Lora Gomes, Budget Analyst. Ms. Gomes is authorized to sign all required grant documents including, but not limited to, the grant agreement, the application form, and payment requests.

The National Park Service has land tenure/ownership of the sites. The Cahoon Meadow project is contained within the designated boundary of Sequoia National Park. The Velvet Grass project is cooperative and includes United States Forest Service lands in Sequoia National Forest, though all work will be done by the National Park Service. A separate letter is included from Sequoia National Forest which authorizes this cooperative proposal for work on their lands.

Sincerely,

Karen F. Taylor-Goodrich
Superintendent

cc: Charisse Sydoriak, Chief of Resources Management and Science
Deb Pfenninger, Chief of Administration

SITE PLAN

The maps on the following 2 pages provide the scale and orientation of the Kern Canyon Project Site. Velvetgrass infestations are noted with red circles or polygons. Total infested area of all the infestations is 4.75 acres. Field crews access the sites either from Mineral King in Sequoia National Park (SNP) or via Jerky Meadow in Sequoia National Forest (SNF), depending on snow conditions at higher elevations. Pack support for field crews bring stock from the south through Sequoia National Forest. Crews will be stationed at the base camp near the Kern Ranger Station, approximately ¼ mile from the boundary of SNP and SNF. Crews will install tarping material over the largest infestations on SNF lands at the beginning of the season. After tarp instillation is complete, crews will begin hand pulling the southernmost infestations and work to the north. This method is the most effective due to the phenology of velvetgrass. Southern populations are more readily identified early in the season, and crews can prevent seed formation and dispersal by working the earliest germinating populations first. At the conclusion of years 4-6 of the project, we expect to have eradicated velvetgrass from the 4.75 infested acres. NPS funded crews will continue to monitor the infestations in perpetuity to ensure that results are sustainable.